THE BUILDER

INCORPORATING

"ARCHITECTURE" and "THE BRITISH ARCHITECT"

VOL. CLXXV OCTOBER 1, 1948 No. 5511

THIS WEEK'S NEWS

PAGE

THE KING has approved the appointment of Lord Morrison as Parliamentary Secretary to the Ministry of Works. 379

MR. LEWIS SILKIN, Minister of Town and Country Planning, has stated that his department will be responsible for dealing with any proposals regarding the commencement of work on the rebuilding of blitzed cities. 379

THE London County Council is to erect, on one of its housing estates at St. Paul's Cray, Kent, 72 larger-type houses, for letting at economic rents, to members of the professional and managerial classes. Rents, which will vary, will be in the region of £130-£150 per annum, exclusive of rates, the tenants being responsible for internal repairs and decorations. 385

THE first of new factories erected on a war-time munitions works at the Aycliffe Estate, Co. Durham, are described and illustrated. 386

THE first report of the Girdwood Committee on House-Building Costs, published yesterday, emphasises the close relationship between costs and the general level of wages and prices, and adds that there can be no ground for assuming that the cost of building will fall within any given period after the end of the war. 391

POWERS of purchase have been accorded the Central Land Board in view of the fact that in many cases land is deliberately being sold at its full value, including development value. 392

WITH effect from midnight on Sunday, October 3, the pay-week in the building industry throughout the country will be from midnight, Sunday, to midnight, Sunday, the pay-day being Thursday in each week. 397

THE ARCHITECTURAL SETTING OF ANGLICAN WORSHIP

THE purpose of this extremely interesting and clearly written book* is to show the interdependence of liturgy and architecture; how liturgical needs influence the design and use of buildings and how buildings have shaped and moulded liturgy which, like the authority of the Church by which it is controlled, is a living, continuous growth. To an understanding of Anglican worship such a study is specially pertinent, for the Church of England started its existence in possession of all the buildings it required. Whereas any new church is built to comply with contemporary needs, for a hundred years after the Reformation few new churches were erected. The old ones may not, in all respects, have seemed ideal to those who had to use them; however much they might be rearranged, their planning and acoustics could not be altered and their form and furnishings were still hallowed by tradition for a church that did not cease to be catholic because it was also reformed.

This dual character of the Church of England is reflected in what has always inspired its worship—an equal reverence for the Word and the Sacraments. The emphasis on each has not always been the same: the auditory church of the eighteenth century was designed to promote intelligent participation in the services and effective hearing and exposition of the scriptures. Against the dominance of the reading pew and pulpit which this entailed, the nineteenth century reacted by asserting the altar as the focus and centre of Christian devotion. But if particular importance was attached to one liturgical centre—to use the terminology adopted by the authors of this book—it was never with the intention of suppressing the other. The basis of Anglican worship is that the liturgy should be thoroughly understood and entered into by the people; priest and congregation are united in a corporate act. Until the Camden Society taught otherwise, it had seemed that that aim could best be realised by using different parts of the church for different purposes—the nave for morning and evening prayer and the chancel for the communion service, the communicants moving up into it at the prayer of invitation. The chancel screen was deliberately retained to mark this division of the building. The system had many advantages. In each case the people were reasonably concentrated; they could hear and join in the prayers and at communion they could understand the rite better for being able to see the actions of the priest.

On the other hand, however much it may now be the fashion to regret them, those changes which swept away three-decker pulpits and box pews had some justification. Untouched examples of mediæval church interiors refurnished in the 17th and 18th centuries are rare to-day and for that reason rightly esteemed as valuable; they always appear quaint and are sometimes charming. But it has to be confessed that there is another side to the picture. The pews were often disposed with extraordinary disregard for the most elementary architectural seemliness, and consisted of woodwork that was nothing more than a careless assembling of mediocre deal panelling with older portions of oak screens and benches. The building was frequently neglected, if not in a state of woeful structural decay, while its internal treatment betokened small respect for its sanctity. An entry in Kilvert's diary, as late as 1872, refers to Boughwood Church in Radnorshire as "a most miserable place. The choir sat upon the altar and played a drum!"

It was inevitable that a generation which was beginning to look with new interest at the architecture of the Middle Ages and to feel stirred by the religious teaching of the early Tractarians should be scandalised. The zeal which remodelled church interiors by the thousand in the Gothic Revival has left

* THE ARCHITECTURAL SETTING OF ANGLICAN WORSHIP. By G. W. O. Addleshaw and Frederick Etchells. (London: Faber and Faber, Ltd.) Price 25s.

a lasting imprint on the nature of the Church of England—its art, its thought and its practice. And probably in the main its effects have been beneficial, though not all of them have turned out as they were intended. Congregations now face the altar and churches are used not in sections but as a whole. The result, however, has not necessarily been to make them better adapted to congregational worship. On the contrary, in a great number—perhaps even the majority of parish churches—there is now between the ordinary worshipper and the priest an unfortunate separation. Nineteenth-century churchmen, in their desire to invest the altar with what had certainly been lost—a sense of awe and holiness—surrounded the chancel with screens and parcloses. The choir, who now took their places within, rapidly assumed the status of an ecclesiastical hierarchy, while the clergy, instead of being in a position to lead the people, tended to become more and more sacerdotal—high priests ministering in a holy of holies apart. When congregations were large and the bulk of the population instructed in at least the elements of the faith, all was well enough; and architecturally, the effect, in churches such as Hoar Cross, could be superb. But to-day, when congregations are small and the bulk of the population indifferent if not ignorant, the unfitness of the normal arrangement from the liturgical standpoint is becoming manifest. At Communion the priest stands facing east at the altar, isolated by the empty chancel from the people scattered in the nave who, if they can hear (which they frequently cannot), certainly cannot see and follow as was possible when earlier usage enabled them to kneel round the altar on three if not four sides. They may feel themselves witnesses of a sacred mystery; they can be less conscious of partaking of the Lord's Supper.

Similarly at matins and evensong the congregation's part in the liturgy has diminished in significance because the direct burden of response falls less on those in the nave than on those in the chancel—the choir—who sit closest to the priest and are in the requisite intimate association with him. Indeed, for the singing or recitation of the daily offices, the cathedral choir or college chapel provides a far better system of seating than the normal church, and one of the most useful sections of this book is that in which attention is drawn to the few parish churches which followed this model, here and in Ireland.

But, throughout, the theme of the book is that the Church of England would do well to learn from its own experience. It is a remarkable fact that this is largely comprised in the one period that has received comparatively little notice. The Anglican temperament has indeed for some time evinced less interest in vindicating the principles of the reformers than in justifying its catholicity. In consequence, both its art and liturgical precepts, when not indulging in freakish experiment, have veered towards a mediævalism with a somewhat antiquarian bias.

The authors of this book, who combine learning with admirable perception and practical sense, have performed a valuable service in directing attention to the contribution which, in the post-mediæval centuries, each age has made to the distinctive worship of the Church of England. To comment adequately on a work so full of information and suggestion is impossible in the limits of a brief review; by all those who are called upon to design or deal with churches in any way it should be bought and read with care.

REBUILDING BOMBED CITIES

THE announcement by Mr. Belcher, Parliamentary Secretary to the Board of Trade, regarding the Government's decision that the rebuilding of central areas in heavily bombed cities shall begin on a limited scale next year indicates the Government's commendable readiness to release at the earliest opportunity as much building work as possible. Everyone wants the scars of war removed from the face of the country, and the reconstruction of war-damaged central areas is a task which, for practical as well as æsthetic considerations, should not be long delayed. Moreover, this work will doubtless provide opportunities for the employment of the various skilled crafts and trades of the industry which the general run of post-war building has not permitted. For these reasons the Government's decision deserves general approval.

However, Mr. Belcher added that the Government could not encourage anyone "to believe that there would be any increase in the labour force or in the amount of steel to be allowed for these purposes." This can only mean that the limited labour and materials now available will be even more widely dispersed, possibly beyond the point at which they can remain effective. By accepting the Government's invitation to make more bricks with no extra supplies of straw local authorities may well succumb to the temptation to use for this additional and perhaps more spectacular work building resources urgently required for current operations. To the more optimistically minded it would appear that a carefully balanced compromise is the answer, but we must be careful to see that this does not lead to sub-standard work.

The Government's decision to make a start on war-damaged areas is an encouraging one, but if the work is to be carried out, then the Government must see to it that adequate extra supplies of materials and labour are made available for the purpose.

FRENCH ROW, ST. ALBANS. The St. Albans City Council is to make application for sanction to raise a loan to acquire this row of gabled premises for restoration.

NOTES AND NEWS

M.o.W. Parliamentary Secretary.

THE KING has approved the appointment of Lord Morrison as Parliamentary Secretary to the Ministry of Works, in succession to the late Mr. E. F. M. Durbin, M.P., who was drowned on September 3 while rescuing his daughter from the sea at Crackington Haven, Devon.

Lord Morrison, who is 66, has resigned his appointment as Lord-in-Waiting to the King on accepting this post. From 1929 to 1931 he was Parliamentary Private Secretary to the late Mr. Ramsay MacDonald, who was then Prime Minister. Lord Morrison was created a baron in 1945.

Rebuilding of Blitzed Cities.

FOLLOWING the announcement made by the Parliamentary Secretary to the Board of Trade in the House of Commons recently that the Government has decided to authorise a start on the rebuilding of blitzed cities, Mr. Silkin, Minister of Town and Country Planning, in a Parliamentary reply has stated that his Department will be responsible for dealing with any proposals. The Ministry, he said, is responsible for approving local authorities' plans for reconstruction, and it is, therefore, appropriate that the Ministry should also accept responsibility for sponsoring the carrying out of the plans.

The Ministry wishes to stress that this decision does not alter the existing responsibilities of other Departments—of the Ministry of Works for building labour and materials, of the Board of Trade for sponsoring urgently needed factories or shops, of the various Production Departments for their own programmes, etc. But where over-riding economic necessity for starting work on a particular building does not exist and a local authority want to start the rebuilding of a blitzed city centre as the nucleus of their new plan, they should settle their programme with the Ministry of Town and Country Planning, who will consult with other Departments as necessary.

The Ministry emphasises that the start can only be a very small one in view of the other demands on building labour and materials and, in particular, of the difficulties over steel.

Theatre Society to Aid Architects.

ALTHOUGH it would appear obvious that an architect should have a complete knowledge of the functional requirements of a building before commencing work on his design, this fact has often been ignored, particularly by those who are responsible for church and theatre design. Architects have been known to create theatres that catered exclusively for an audience but overlooked the requirements of the players. Any architect is aware of the more obvious needs of such a building, but what of the mysterious unknown beyond the theatre wings? What are the requirements of those responsible for the maintenance of the theatre and the staging of the play? The newly-formed Society for Theatre Research proposes to assist those in need of advice on the subject of theatre construction. It is not the intention of this group to pose as an expert body to tell architects *how* to build theatres, but it will always be ready to give information on past methods of building. This will be one of the many aims of the society which will encourage historical research, assist it, and bring together people interested in every aspect of the history and technique of the drama and the playhouse. It will provide a link between the practical requirements of the modern stage and the result of historical research by organising large-scale projects of research beyond the means of individuals, and supplementing existing collections of theatrical matters. It will be a clearing house for information on the history of the theatre and on sources where it can be studied in detail, and will hold regular meetings and lectures. The British Theatre Institute, which is being founded under the auspices of UNESCO, is a centre for the collection of information about the contemporary theatre and for the dissemination of that information, working in conjunction with similar institutes in all countries with theatre activity. It is not a centre for research as this new society proposes to be, and it is hoped that the Institute and the Society for Theatre Research will work in co-operation as there will be no clash of functions. Several architects have already become members of the society, including Mr. Roger Furse, who was responsible for the settings and costumes of the film "Hamlet." At the second meeting on November 7 there will be a lecture on "Theatre Architecture" by Mr. Richard Southern. On October 7 there will be a discussion on three aspects of the society's work. Applications for individual or corporate membership, which should be accompanied by the annual fee of 2 guineas, should be made to Mr. H. M. Cotterill, 24, Floral-street, W.C.2. The joint secretaries are Miss Sybil Rosenfeld and Mr. Bertram Shuttleworth, 7, Ashburnham-mansions, S.W.10.

Retirement of Mr. F. G. Baker.

AFTER 48 years in the service of the R.I.B.A., Mr. F. G. Baker has retired from the post of Chief Clerk. This news will be greeted with regret by many members of the Institute who have had experience of his unfailing courtesy and the great efficiency which he brought to bear on all arrangements for Institute functions, notably the Annual Conference, which is a model of its kind. Mr. Baker has contributed some interesting reminiscences to the current issue of the *Journal* R.I.B.A. His first contact with the architectural profession was in 1897, when he was a junior in the late Beresford Pite's office. In September, 1900, Mr. Baker went to the R.I.B.A., then under W. J. Locke's secretaryship, and at a time when income tax had just gone up from 8d. to 1s. in the £. Since then he has seen, and shared in, many of the Institute's developments though, with a natural modesty, he gives no hint of this. All members of the Institute will join us in wishing him a long and happy retirement.

The Late Herbert Mansford.

FOR nearly fifty years the late F. H. Mansford, F.R.I.B.A.,who died in 1946, gave generous service to the Ecclesiological Society, reading many papers and conducting visits. As a tribute to his memory, part 5 of the new series of the Society's Transactions is devoted to extracts from his manuscripts, consisting of notes and comments prepared for talks and lectures to the Society and to his students, selected and arranged by Mrs. A. R. Hatley, B.Sc., F.R.G.S. Mr. W. W. Begley, F.R.Hist.S., L.R.I.B.A., an old friend of Mansford, contributes a sympathetic memoir.

Mansford will be remembered as a kindly, studious man and a competent architect, with an intense love of London and its buildings. "To a profound understanding of mediæval architecture," writes Mr. Begley, "he united a wide knowledge of modern churches, and up to a few months of his death . . . he usually had some new discovery to report." His notes on the City Churches are full of interest, showing not only careful research, but keen perception, but it would have been an advantage if they could have been dated (or supplemented by an up-to-date footnote) for alas, much of what he records is no more. His general suggestions as to what might be done about some of these bombed churches are eminently sensible. Excellent, too, are his brief surveys of nineteenth- and twentieth-century architecture. All who knew Mansford will wish to have a copy of this memorial number. It can be obtained, price 10s. 6d., from the Society's address, Walcot House, 139, Kennington-road, Lambeth, S.E.11.

Conservative Conference and Housing.

SIX motions on housing have been tabled for discussion at the 69th annual conference of the National Union of Conservative and Unionist Associations, to be held at Llandudno from October 6 to 9. The terms of each of the six motions are somewhat similar and the debate and vote will take place on that of Mr. C. Ian Orr-Ewing, O.B.E., who will move: "That this Conference records its concern at the high costs of housing and its belief that only full and fair scope for competitive enterprise throughout the building industry will permit the national resources available for building to be used to the utmost advantage."

"Design at Work" Exhibition.

THE first exhibition of the work of Royal Designers for Industry, which will be opened by H.R.H. The Duchess of Kent at the Royal Academy on October 26 at 3 p.m., is being sponsored by the Royal Society of Arts and the Council of Industrial Design. By explaining the designer's place in modern machine production and marketing methods it will demonstrate his work. It is also intended that the exhibition shall stimulate the production of British goods of outstanding design in time for showing to the world during the 1951 Festival of Britain. Incidentally, it is interesting to note that a hundred years ago the Royal Society of Arts held one of a series of industrial exhibitions which led to the Great Exhibition of 1851.

The public will be able to study the work of the designer in a number of subjects ranging from the creation of a teapot to the design of a record-breaking jet-engined aircraft. By means of actual objects, photographs and dioramas, they will see, for the first time, the various stages in the creation of a number of well-known products and of some new designs that have not been shown before. They will see the designer in active relationship with other members of the production team, from the preparation of his initial sketches, through discussions with the production and works' staffs, the building of prototypes, the making of modifications, the preparation of working drawings, the tooling-up of the machines to the ultimate manufacture of the finished product. References will be made to the effect of materials and techniques on the shape of everyday things, as well as the effect of social conditions, architecture, handicrafts, history and tradition.

The exhibition will be open from October 27 to November 28, weekdays 10 a.m.—7 p.m., Sundays 2 p.m.—6 p.m.

Revision of Capital Schemes.

THE probable effect on the country's economy of the limited measure of re-armament now decided upon is being closely studied by the Government's planning staffs. This subject will engage the attention of the Chancellor of the Exchequer immediately on his return from Washington, states the Parliamentary Correspondent of *The Times*.

The diversion of man-power and materials to the manufacturing work for the services will make necessary some revision of the capital investment programme. Materials may present a more serious problem than man-power, particularly in view of the already fierce competition for steel. The Government will be anxious to safeguard such priorities as housing and the building of new electricity works, and the indications are that such contraction as is necessary is more likely to affect private industrial building and the building of schools, hospitals, and public institutions. The intention is to avoid so far as possible any interference with production for export or with the production of consumption goods for the home market.

Scots Furniture Competition.

A COMPETITION has been launched by the Scottish Committee of the Council of Industrial Design to stimulate new ideas in the design and production of furniture by Scottish manufacturers. The closing date for entry forms is November 8 and the furniture must be submitted by January 15. The Committee's address is 95, Bothwell-street, Glasgow.

The Wallace Collection.

THE Lords Commissioners of the Treasury have reappointed Mr. James A. de Rothschild a trustee of the Wallace Collection on the completion of his term of office and have appointed Mr. J. F. A. Smith a trustee in succession to Mr. Ronald Tree, who has retired on the completion of his term of office.

Memorial to David Lloyd George.

IT is proposed to build a Lloyd George Memorial College at Llanystumdwy, Caernarvonshire. An appeal for funds has been launched.

Exhibition of Housing.

The eleventh annual meeting of the Housing Centre was held on Monday last, when Sir Patrick Abercrombie presided and declared open the Exhibition of Work by Housing Centre members. The Exhibition will remain open until October 9.

The Exhibition is the result of an invitation to those architect members of the Housing Centre who are in private practice to send in for display one example of their post-war housing work. The schemes submitted are very varied and include work for local authorities, housing associations and individual owner-occupiers. There are three schemes for rural areas. Schemes at a high density and consisting mainly of flats are from London and Greater London. Wales is represented by three housing estates for Urban District Councils, one built in stone. A layout from the Hartlepools Plan and a scheme for Kirkham, Lancs., came from the North of England, and the Midlands are represented by work for housing associations including a large proposed scheme near Coventry and by interpretations of the Reilly Green by two different firms for the Bilston Corporation. The houses for the private clients are necessarily limited to suit present-day restrictions on size and cost. The schemes exhibited show a wide diversity of treatment even within the necessary limitations of present standards for local authority work. Some represent the work of firms who had established a reputation for low-cost housing work before the war, and others are from younger architects who, owing to the war, have had little previous opportunity of building.

Royal Charter for Engineers.

THE King has approved the grant of a Charter of Incorporation to the Institution of Municipal Engineers. The Institution was founded in 1873 as the Association of Municipal and Sanitary Engineers and Surveyors, and from 1909 to 1947 was known as the Institution of Municipal and County Engineers. The word "county" was removed from the title in 1947 to simplify the designation of members in the event of the granting of a charter. It was, however, intended that the word "municipal" should be used so as to include counties, and urban and rural districts, as well as municipal corporations, and the membership of the chartered body will embrace engineers and surveyors serving all classes of local authorities. Members and associate members of the chartered Institution will be entitled to the designation "Chartered Municipal Engineer."

The first president of the chartered Institution is Mr. C. Greenwood, city engineer of Chester; the vice-presidents are Mr. H. J. Manzoni, city surveyor of Birmingham; Mr. A. Floyd, county surveyor of West Sussex, Mr. H. Cliff, borough engineer of Bromley; and Mr. D. B. McLay, city engineer of Dundee. The first secretary is Mr. C. W. Scott-Giles. Honorary members, corporate members, and others attached to the former Institution, become members in equivalent grades of the chartered body. The honorary members include Mr. Winston Churchill, Field-Marshal Lord Alexander, Field-Marshal Lord Montgomery, and Field-Marshal J. C. Smuts.

An Appointment.

MR. DONALD A. GOLDFINCH, A.R.I.B.A., has been appointed architect to the Birmingham Regional Hospital Board, in which capacity he will advise on the future programme and design of hospital buildings over the greater part of five Midland counties.

Professional Announcements.

JOHN KEPPIE & HENDERSON & J. L. GLEAVE is the new name of the firm in which Mr. J. L. Gleave, A.R.I.B.A., has recently been associated as partner. The practice will be carried on, as before, at 196, West Regent-street, Glasgow, C.2.

FOLLOWING the death of MR. R. T. DADSON, O.B.E., F.R.I.C.S., senior partner of Messrs. R. T. Dadson, chartered surveyors, the practice will be carried on by the remaining partner, MR. F. D. WOOLDRIDGE, A.R.I.C.S., under the same style and at the same address, 43, Doughty-street, Bloomsbury.

FROM "THE BUILDER" OF 1848

Saturday, September 30, 1848.

AN ARCHITECT'S JAW.—Amongst a number of very odd things, the property of the late reverend Ordinary of Newgate, Mr. Cotton, sold a few days ago, was the asserted "lower jaw of Peter of Cole-Church, the original architect of London-bridge. This bone was found on removing the foundation of part of the old bridge by Mr. Knight, who superintended the building of the new bridge under Rennie, and the relic was christened by him without any godfather to answer for the child. The real value of the thing seems to have been well understood, for the public would not "take his jaw," and poor Peter fetched but five shillings!

COMING EVENTS

Monday, October 4.

THE SOCIETY OF ENGINEERS.—"The Work of a Divisional Engineer in Northern Rhodesia," by Mr. G. C. Baldwin, A.S.M.E. Geological Society, Burlington House, Piccadilly, W. 5.30 p.m.

Tuesday, October 5.

THE LONDON SOCIETY.—"The Conversion of Terrace Houses," by Mr. Hugh Roberts, F.R.I.B.A. The Royal Society of Arts, 6-8, John Adam-street, Adelphi. 5.30 p.m.

Wednesday, October 6.

THE ARCHITECTURAL ASSOCIATION.—"Architecture and Education," by Mr. Richard Neutra, F.A.I.A. 34, Bedford-square, W.C.1. 7.45 p.m.

TOWN AND COUNTRY PLANNING ASSOCIATION.—Howard Memorial Dinner. Presentation of Howard Memorial Medal to Mr. Richard Reiss. Waldorf Hotel. 7 p.m.

NATIONAL INSTITUTE OF INDUSTRIAL PSYCHOLOGY.—"Morale, Military and Industrial," by Professor E. H. Phelps-Brown, M.B.E., M.A. London School of Hygiene and Tropical Medicine, Keppel-street, W.C.1. 6 p.m.

Thursday, October 7.

THE INSTITUTION OF ELECTRICAL ENGINEERS.—Inaugural address as president by Mr. T. Graeme N. Haldane, M.A. The Institution, Savoy-place, W.C.2. 5.30 p.m.

SOUTH-EASTERN SOCIETY OF ARCHITECTS (Maidstone Group).—"Concrete Troubles," by Mr. J. Singleton-Green, M.Sc. Maidstone Technical Institute, Tonbridge-road, Maidstone. 7 p.m.

Saturday, October 9.

PROVIDENT INSTITUTION OF BUILDERS' FOREMEN AND CLERKS OF WORKS.—Annual social and dance. Victoria Hall, Victoria House, Bloomsbury-square, W.C.1. 7 p.m.

OBITUARY

Reginald Arthur Rix, A.R.I.B.A.

WE regret to record the death of Mr. Reginald Arthur Rix, A.R.I.B.A., aged 82, of Edgcumbe Cottage, Lincoln Hatch-lane, Burnham, Bucks, on September 22. He was senior partner of Rix & Rix, High-street, Burnham, before retiring in 1942. He designed the Burnham war memorial and was particularly interested in the restoration of St. Peter's Church, in that town. In 1922 he was chairman of the Bucks Architectural Association, and from 1927 to 1929 president of the Bucks, Berks and Oxon Architectural Association.

Edgar Raymond Taylor, A.R.I.B.A.

WE regret to record the death of Mr. Edgar Raymond Taylor, A.R.I.B.A., aged 69, at Newlands, Grange-over-Sands. He was once architect to the Singapore Harbour Board.

Cecil Herbert Morgan, F.R.I.B.A.

WE regret to record the death, on September 14, of Mr. Cecil Herbert Morgan, F.R.I.B.A., aged 85, at Bath. He had spent some time in India, where he was engaged on Government developments. He retired in 1924.

BRITISH COLONIAL ARCHITECTURE

10.—Burma, Malaya and Hong Kong

By MARTIN S. BRIGGS, F.R.I.B.A.

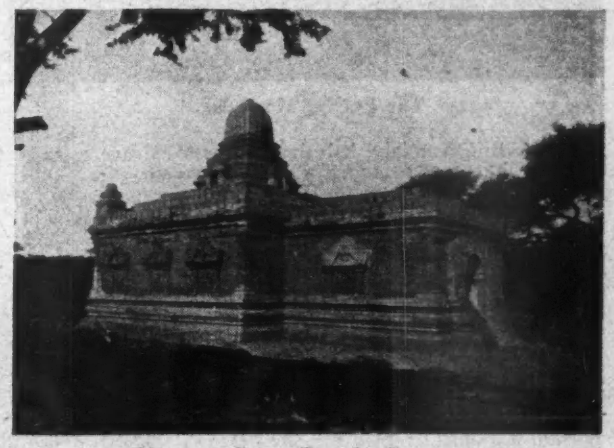
OF numerous British possessions in the Far East, the above three are the most important, and were mainly acquired during the 19th century; but Burma, as everyone knows, became independent a few months ago. The traditional features of its architecture are, like those of South India and Ceylon, exotic and even incomprehensible to eyes trained by a study of European forms. They have been maintained without marked alteration right up to the present day; indeed, many of the most picturesque and famous monuments are less than a century old. British architects have certainly left their stamp on the country, as will shortly appear; but the sum total of their work, after a hundred years of occupation, is relatively small, except in Rangoon.

A primitive race was already established in the country when the ancestors of the modern Burmese people trekked southwards into it from the arid steppes of Mongolia, in search of a warmer climate and a more fertile territory. Arriving about the beginning of the 9th century A.D., the newcomers founded their capital at Pagan in central Burma and erected there a remarkable mass of buildings, many of which still survive in a more or less ruinous condition. They consist of pagodas and temples, mostly dating from the reign of King Anawrahta (1044-77), who united Burma under his rule as Asoka had united India long before. Pagan retained its importance until it was destroyed by the Tartars under Kublai Khan in 1227 and became subject to China. Thereafter, a long period of civil strife ensued which was unfavourable to building, and the city of Ava, which became the capital of Burma for 500 years after the fall of Pagan, is in ruins, as is Amarapura, which succeeded it from 1783 to 1859.

Of these three cities, Pagan is the most important architecturally and contains the largest number of surviving monuments. Its ruins line the banks of the river Irrawaddy for about 20 miles, extending on an average about five miles back from the banks, and there are still traces of some 5,000 pagodas and monasteries out of about 13,000 that once stood there. Many are in Government custody, and the chief examples were kept in repair—up to the recent change of status—by the Public Works Department. The reason why nearly all the surviving old buildings in Burma are pagodas and temples is that all the palaces and houses were and still are constructed of wood, with the result that constant fighting—right up to date—and frequent fires have destroyed them. Of the innumerable pagodas which are plentifully scattered over all the populated parts of the country and occur even in the remote areas, many have a substructure of brick or stone which has resisted all these calamities, but more have perished. Burma is unique in the possession of these countless religious buildings, and also in the fact that they continue to be erected at the present day much in the style of past ages, so that the greater part of the strange spires or gilded domes that impress visitors is singular rather than ancient.

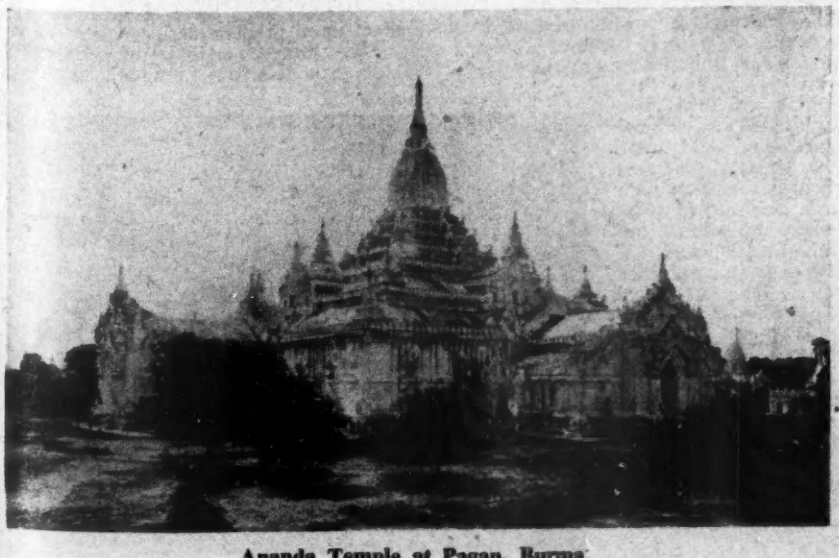
The term "pagoda" is loosely applied by Europeans in Burma to two very different types of structure: (i) a bell-shaped *stupa* raised on a terrace or platform and crowned with a curious finial; (ii) a temple which is square on plan and which has a pyramidal roof terminating in the curved *sikhara* of the Indo-Aryan style. Nevertheless, Burmese pagodas differ from anything in India. One of the most famous examples in Burma is the Shwe Dagon pagoda at Rangoon, erected at a very remote date (possibly 2,300 years ago) and subsequently enlarged by successive builders until it attained its present immense size, 321 ft. high on a platform 900 ft. by 685 ft., which itself rises about 165 ft. above the surrounding level. It is "multi-plane" on plan, with seven angular projections, and on the top of the ground storey are several miniature pagodas. Tradition relates that the original structure was only 27 ft. high, but it appears to have reached its present size so long ago as 1564. The whole "bell" is covered with gold from base to summit, and the gilding is renewed once in every generation by public subscription. This impressive monument was in existence long before Rangoon was founded in 1755, and lies outside the geometrically planned city built by the British in the 19th century. Another striking example, the Sule Pagoda, was incorporated in that formal plan, and now stands isolated at the intersection of two of the chief thoroughfares in the heart of the city.

Some authorities hold that the finest pagoda in Burma is the Shwehmawdaw at Pegu, placing the Shwe Dagon next in order of importance, but many of the ruined temples of Pagan come high on the list. Fortunately, these seem to have suffered little during the recent war, and it is good news that the Shwe Dagon has also escaped. The Ananda Pagoda at Pagan, illustrated here, was erected 1057-85 and is a square building measuring, with its projections, 280 ft. in each direction. The central part is set back in receding stages, rising to a total height of 183 ft. Its construction is almost as solid as that of an Egyptian pyramid, intersected only by two narrow corridors. The decoration is less exuberant than that of many Burmese buildings, but the pointed doorways are interesting, in view of the early date. This pagoda was adopted as a model when one of the Burmese kings built the Kyauktaugyi Temple at Amarapura in 1847.



Nanpaya Stone Temple, Pagan.

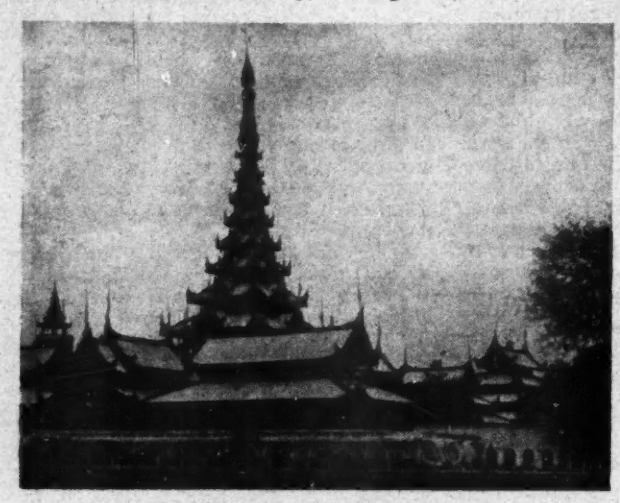
Very different in type is the Nanpaya Temple (*c.* 1050), near Pagan, also illustrated here, with remarkable decoration in brickwork resembling that of Cambodian architecture. These few examples are merely typical of other pagodas and temples to be found in great numbers in Mandalay, Pegu, Moulmein, Prome and elsewhere. Burmese architecture is not and never was particularly admirable; it is somewhat shoddy in its modern manifestations, and inclined to be gay and volatile like the Burmese people, but its carvings in wood have always been excellent, even if they have tended to decline in merit during recent years. The illustration of the Royal Palace at Mandalay, completely destroyed during the recent war, shows how traditional architecture has persisted up to modern times, for it was erected at the period when Mandalay was the capital, from 1860 to



Ananda Temple at Pagan, Burma.

1885. With its elaborate sequence of throne-rooms and its monastery, it was a curious survival of a civilisation that seems to have gone for ever.

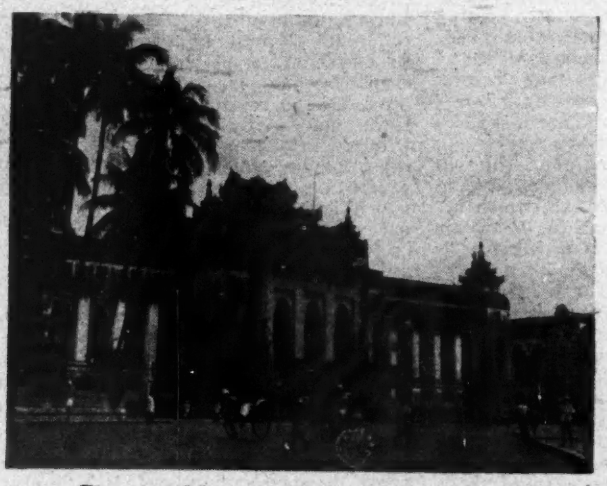
European trade with Burma began in the 16th century, but the country remained virtually isolated from the West up to the early 19th century, when ignorance of British might led the Burmese king of that day to launch a rash attack on the frontier districts of India—Assam and Manipur. The British annexation of Burma took place in three successive stages after the three Burmese wars, in 1826, 1852 and 1886. The architectural fruits of our occupation are mainly to be seen in the larger towns, especially in Rangoon, which became the capital in 1886. When the British first arrived there in 1824, it was a scattered and insignificant place; but, as already mentioned, it contained two large and important Buddhist temples, the Shwe Dagon and Sule Pagodas. At some later date, which I have been unable to ascertain, it was planned on American "gridiron" lines by a British engineer officer, with long straight streets having a minimum width of 50 ft., and rectangular blocks numbered from the centre. In spite of this apparently unpromising method of layout, it is a very fine city, with extensive gardens and beautiful lakes, on the banks of one of which stands the new university. The public buildings include many that are of no special architectural merit, such as the florid Government House, the Secretariat, and the Anglican cathedral. The Roman Catholic cathedral is a Gothic design of more interest, the picturesque new Municipal Building is an ambitious attempt to marry modern requirements to a Burmese exterior; there is a magnificent new racecourse and grandstand; and a dignified building for the university was erected in 1928. With a population of over 400,000, Rangoon is a very cosmopolitan city, and thus differs from Mandalay, less than half its size, where three-quarters of the inhabitants are Burmese Buddhists. Mandalay is a modern city, planned on chess-board lines, but its crowded blocks are squalid if picturesque, and it does not contain many recent public buildings of note. In its centre is the square enclosure of the Royal Palace (already described), now destroyed, round which is formed the larger square known as Fort Dufferin surrounded by a moat 75 yards wide. Fort Dufferin is 1½ miles square, with high red brick walls finished with battlements and loopholed. Within the fort stands Government House. The outer quarters, all planned in rectangular blocks, suffered severely in the recent war, as the buildings were mainly constructed of wood.



The Palace, Mandalay.

MALAYA AND SINGAPORE

MALAYA, as the British possessions formerly known as the "Straits Settlements" and the "Malay States" are now conveniently called, was acquired gradually, and, like Burma, was the seat of an ancient civilisation when British traders first reached it in the 17th century. The original inhabitants, the Malays, are a people of uncertain origin, largely converted to Islam at an early stage. One of their chief centres in the 14th century was at Tumasik, on the present site of Singapore; and, after its decay, the kingdom of Malacca was established, this becoming Muslim (*c.* 1450). Intercourse with Siam and China was close when Portuguese voyagers arrived at the beginning of the 16th century, captured the mosque at Malacca, and slaughtered its "Moorish" inhabitants in 1511.

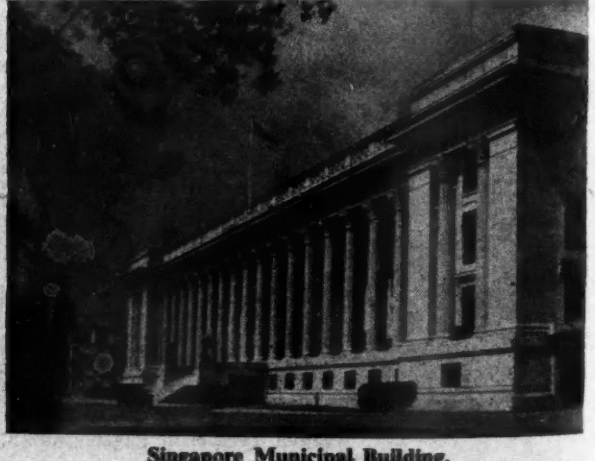


Rangoon Municipal Corporation Building.

The Portuguese, who regarded this venture as a holy crusade, erected a number of churches, and retained Malacca till 1641. Then the Dutch in turn vanquished the Portuguese and held down the Malays. The first British threat to their rule occurred in 1786, when the almost uninhabited island of Penang was occupied by one Captain Light on behalf of H.B.M. Government in return for protection afforded to the Sultan of Kedah, a strip of the opposite mainland being added in 1800 under the name of "Province Wellesley." The real maker of the new colony was, however, Sir Stamford Raffles (1781-1826), who originally came out to Penang in 1805 in the service of the East India Company, whose employment he had entered as an office-boy at the age of 13. Ten years after his arrival in Malaya, the idea came to him of founding a British naval station on the swampy and practically deserted island of Singapore, where, as previously mentioned, a Malay capital had flourished long before. In the teeth of much opposition, he gained his point at last in 1819, and the great city of Singapore still honours his name in many of its institutions and buildings, among them "Raffles College," which he advocated before his death, but which was not opened in its present home till 1928. From the initial foundation of Singapore in 1819 up to the Japanese occupation of 1942-45, the history of the city has been one long record of steady progress.

On the mainland of the peninsula, the British had avoided all territorial adventures and commitments after the union of the "Straits Settlements" (Singapore, Malacca, and Penang) in 1829; but disorders between Chinese and Malays, and between rival rulers of the various native states, led to the appointment of a British governor in Perak in 1873, then to another in Selangor, and finally to a Federation of Malay States (Perak, Pahang, Selangor and Negri Sembilan) in 1895. Recently came the union of the Straits Settlements and the native States into a single Federation. Thus there have been several distinct influences upon architectural development in Malaya since British occupation. While Penang and Singapore were entirely new settlements, many of the towns of the interior possessed a number of Muslim mosques built on traditional Arab lines; and in their palaces, as well as in their new religious buildings, the Muslim sultans adopted, and still adopt, a style which is partly Mogul but shows traces of Chinese and Indo-Chinese influence. In Malacca there are old Portuguese and Dutch churches, but these have had little effect upon modern design.

The inland capital of Federated Malaya is at Kuala Lumpur, about half-

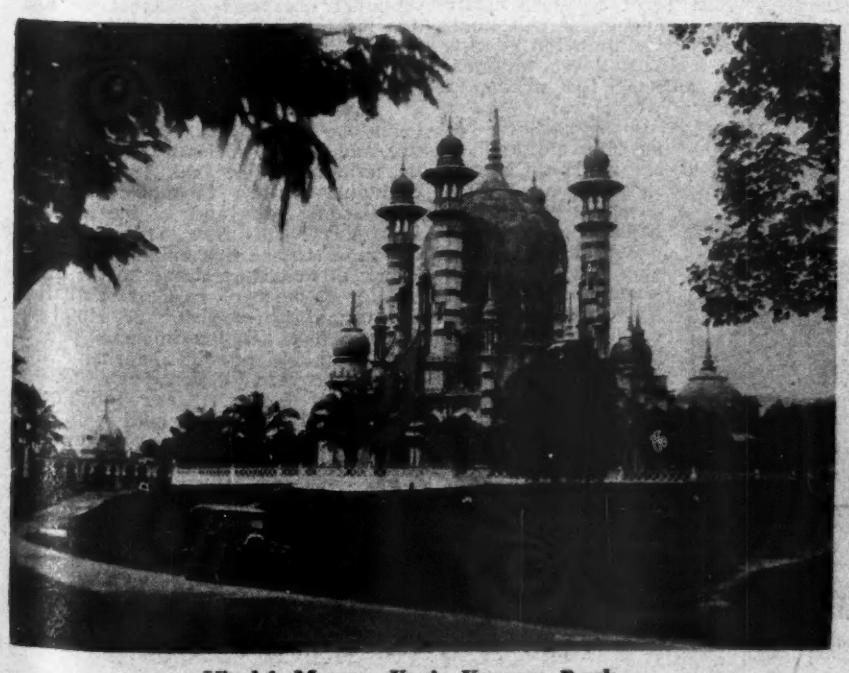


Singapore Municipal Building.

Victoria Memorial Building, Singapore.

way between Singapore and Penang. This new important city (population *c.* 112,000) did not exist until some 60 years ago, when it consisted of a few huts thatched with palms, but to-day it contains a huge group of Government offices grouped round a *padang* or open space, adjoining which is also the Selangor Club. The view reproduced here shows what sort of neo-Malayan architecture the public authorities considered appropriate to modern needs a few years ago. Other modern buildings in Malaya are quasi-Saracenic—among them the mosque illustrated below. Some of them are hideous, and the railway-station at Kuala Lumpur in the same style is a bombastic affair; but the new Law Courts at Johor Baru, by Messrs. Stark and McNeill, are admirably designed in a dignified Renaissance style, and the enormous Police Barracks at Penang, by F. Dorrington Ward, fulfil functional needs in a sensible way. Penang, now a city of 160,000 people, contains several buildings dating from the early days of British occupation, especially the Police Courts (1806), St. George's Church (1817-18) and the charming pavilion or *tempietto* in memory of Captain Light, which stands outside it amid pleasant tree-lined lawns. All are dignified, and resemble American colonial work of the period. Penang is also famous for the great variety of its Buddhist temples,

Secretariat Building and the Selangor Club, Kuala Lumpur.



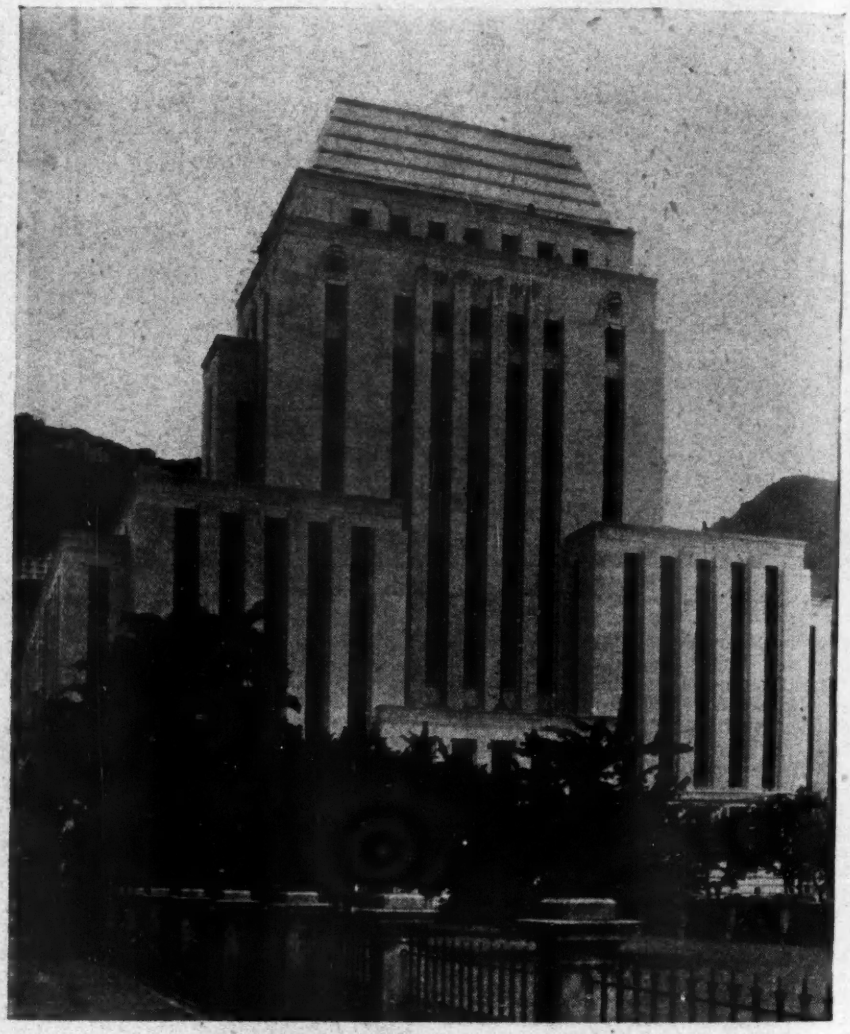
Ubudah Mosque, Kuala Kangsar, Perak.

all comparatively modern. Seen from the surrounding hills, it recalls a Mediterranean town with its red roofs and its yellow stucco walls.

The great city, harbour and fortress of Singapore may claim to be an all-British development, but its British inhabitants constitute only a small fraction of the total population (*c.* 720,000), and even the Malays and Indians are far outnumbered by the Chinese. Hence it happens that only half the members of the Malayan Institute of Architects bear English names; and that the palatial dwelling-houses in European and even neo-Georgian style illustrated in *The Malayan Architect* are mostly the homes of wealthy Chinese merchants and are frequently designed by Chinese architects. Like Rangoon, Singapore is a cosmopolitan city, and its chief public buildings follow European fashions. Among its principal churches, the oldest is the Roman Catholic cathedral of the Good Shepherd, built in 1843 and enlarged in 1888, an attractive classical design with Doric columns and a "Wren" steeple, recalling the best American colonial work. The Anglican cathedral of St. Andrew is an orthodox building in Early English Gothic of surprisingly correct style, considering that it was designed by an engineer, Colonel MacPherson, in 1854. The Portuguese church of St. Joseph, begun in 1904, follows the Spanish or Portuguese Gothic tradition, and is a pleasing cruciform composition with a polygonal apse and a western tower. The handsome Armenian church (1905) replaces an earlier building of 1835. There is a picturesque Chinese temple dating from the early period of the colony, and many other temples and mosques.

The chief group of public buildings overlooks the *padang* between the Anglican cathedral and the water-front. The Victoria Memorial Hall, an ornate "free classic" design with a tall central campanile or clock-tower, occupies one of the flanks and is characteristic of its Edwardian period. On the waterside is Fullerton Building, containing the General Post Office, another imposing classical pile on an angle site, with massive colonnades and twin towers. The central building facing the *padang* is the fine Supreme Court (1937), designed by F. Dorrington Ward, the Government Architect, who retired in 1939. This great pile has a cornice height of 75 ft., above which rises a commanding dome. To the right of it is the admirable Municipal Building (1929), occupying a site 428 ft. by 218 ft., in a stately classical style, faced with artificial stone. This notable design, illustrated here, was the work of Alexander Gordon, who came to Singapore in 1923 and became

Municipal Architect in 1929. Another building by the same architect is the Power Station (1930). F. D. Ward designed, beside the Supreme Court just mentioned, the great Terminal Building for the new civil airport (1934-37), the Hill-street Police Barracks (1934), the Customs Department Examination Station (1936) and the Marine Police Station (1936). This last is a refined building suggesting the work of Lutyens, but some of the others follow modern fashion with ample glass-area though with all the windows shaded by balconies. Of the firms of private practising architects, the most prominent in the decade before 1930 or so was that of Keys and Dowdeswell, who produced, among many substantial buildings, the Chinese Overseas Bank (in neo-Chinese style), the Capitol Theatre, the new K.P.M. Offices, and the Great Eastern Life Building; and Messrs. Swan and Maclaren, designers of the Hong Kong and Shanghai Bank, the enormous grandstand and clubhouse of the Turf Club, the new office-buildings of the Portuguese Mission, and a charming Roman Catholic chapel. The Central Police Station and the Raffles Museum require no special comment; but mention must be made of two buildings which present a striking contrast in this city of all the styles—the austere and dignified Railway Station and the frolicsome Cathay Building with its ultra-modern flats and a cinema below.



Hong Kong and Shanghai Bank, Hong Kong.

HONG KONG

THIS small island, close to the Chinese coast, though notorious as a refuge for pirates and smugglers, was inhabited only by a few fishermen and farmers when it was ceded to Great Britain in 1841, partly as a solatium for the ill-treatment of British merchants in Canton, partly to provide a secure base for trade with South China. Its subsequent amazing growth into a great city, port and naval base has been as essentially a British achievement as that of Singapore, and it is as unmistakably a cosmopolitan city, with a vast preponderance of Chinese in its huge population and a definitely English aspect in all its principal buildings. When the British arrived there was no architectural tradition on the island to influence their design, and the territory was surveyed by a naval officer. The first houses of the colonists were of wood, imported from Singapore, on brick and stone foundations. The city thus founded was inevitably called "Victoria," the name which it still bears officially, and was planned on the north side of the island facing the Chinese shore. The island is very hilly, the highest point, Victoria Peak, rising steeply from the harbour; and most of the building sites have to be terraced. The island itself is very small (32 square miles), but the flat peninsula of Kowloon was added in 1860, and in 1898 the extensive "New Territory" (355 square miles) on the mainland. Architectural interest is chiefly concentrated in the city.

By 1842, according to a local historian, "funds were collected for erecting a Colonial Church which was to be a Union Church, in which 'members' of the Church of England and the Free Churches should unite. The Government, however, had applied for a colonial chaplain and disapproved of the proposed union. A matshed church was erected on the military parade-ground and the Government gave orders to erect a building which was later dedicated to St. John the Baptist." This church, in Gothic style, was completed in 1849, and then raised to cathedral status. The first Roman Catholic church, in Pottinger-street, had already been consecrated in 1843. The colony soon began to prosper and by 1861 had become self-supporting. Not many of its public buildings before the First World War are of outstanding merit, and Government House is respectable rather than inspiring. The various large schools and hospitals followed conventional lines and it cannot be said that the new university erected early in the present century did much to raise the standard of design. The Law Courts (1912) and other official buildings showed a marked improvement; the new Peninsular Hotel (1928) is at least attractive, and rather American in appearance; the terminus of the Peak Tramway is a creditable exercise in modernism; and the startling skyscraper of the Bank of East Asia recalls New York. But the two most striking new buildings of Hong Kong, in welcome contrast to the dingy squalor of much of its Chinese quarter, are the attractive Lido and Hotel on Repulse Bay, and the immense pile of the Hong Kong and Shanghai Bank, illustrated here, designed by G. L. Wilson (of Messrs. Palmer and Turner of Shanghai) and commenced in 1934. It occupies nearly a square site in the centre of the city and is 220 ft. high. Hong Kong suffered severely during the Japanese occupation, when some 20,000 dwellings as well as many schools and public buildings were destroyed, mainly by allied bombing.

Government House, Hong Kong, from the North.

*** The Burmese pictures are provided by the courtesy of the Imperial Institute; and the Malayan by the Government of Malaya. The next and concluding article will deal with East and West Africa.

L.C.C. HOUSES FOR PROFESSIONAL CLASSES, ST. PAUL'S CRAY

CYRIL H. WALKER, O.B.E., L.C.C. DIRECTOR OF HOUSING AND VALUER
S. HOWARD, L.R.I.B.A., HOUSING ARCHITECT

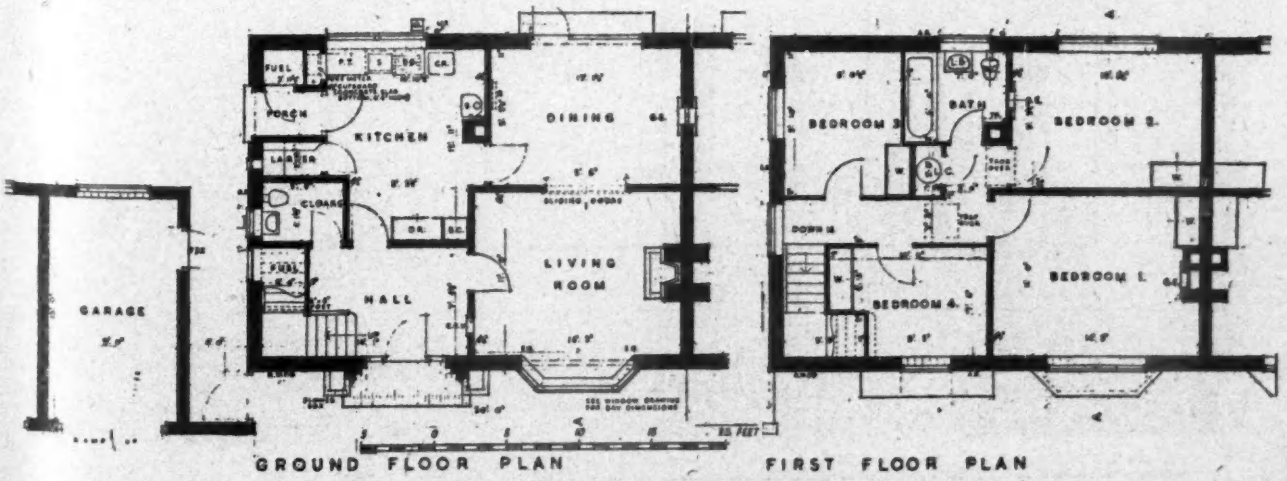
A NEW stage of development in municipal housing was reached on Wednesday last, when the leader of the London County Council, Mr. I. J. Hayward, J.P., cut the first sod on a site at the L.C.C. housing estate at St. Paul's Cray, Kent. On this site will be erected the first of 72 larger type houses for letting, at economic rents, to members of the professional and managerial classes. Each house has a cloakroom off the hall complete with wash-basin and lavatory, a constant hot-water system, heated towel rail in bathroom, sliding doors between dining-room and sitting-room, and a garage—either separate or incorporated in the house.

Rents have not yet been approved. They will vary according to the type of house, situation and other factors, but, broadly speaking, they will be in the region of £130-£150 per annum, exclusive of rates, the tenant being responsible for internal repairs and decorations.

To implement the general policy of mixed development, and to ensure that future estates will house an accurate cross section of the population, ultimately 5 per cent. of all houses to be erected on L.C.C. estates will be of the new types.

The total area of the estate is 570 acres, and the make up is: 3,883 dwellings (50 per cent. brick, 50 per cent. no fines concrete, including three-storey blocks of flats) occupying 362 acres; five modern schools (71 acres); public open spaces, including large children's playground (84 acres); churches, shops, community centre, cinema, public-houses, etc. (41 acres); industrial (12 acres); concrete roads (ten miles); and main sewers (40 miles). Work was started on roads in August, 1947, and is now half-completed. Work started on dwellings in April, 1948, and to date 310 houses are at various stages of construction. The total cost of the estate is £5,000,000.

The whole of the work is being carried out by the Council's Director of Housing and Valuer, Mr. Cyril H. Walker, O.B.E. The layout of the estate, contract drawings, etc., is the work of the Council's Housing Architect, Mr. S. Howard, L.R.I.B.A. The execution of the contracts is under the supervision of the Council's Divisional Engineer for Housing, Mr. R. D. Waters, O.B.E. The main contractors for roads, sewers and erection of dwellings, etc., are Messrs. Holland and Hannen & Cubitts, Ltd.



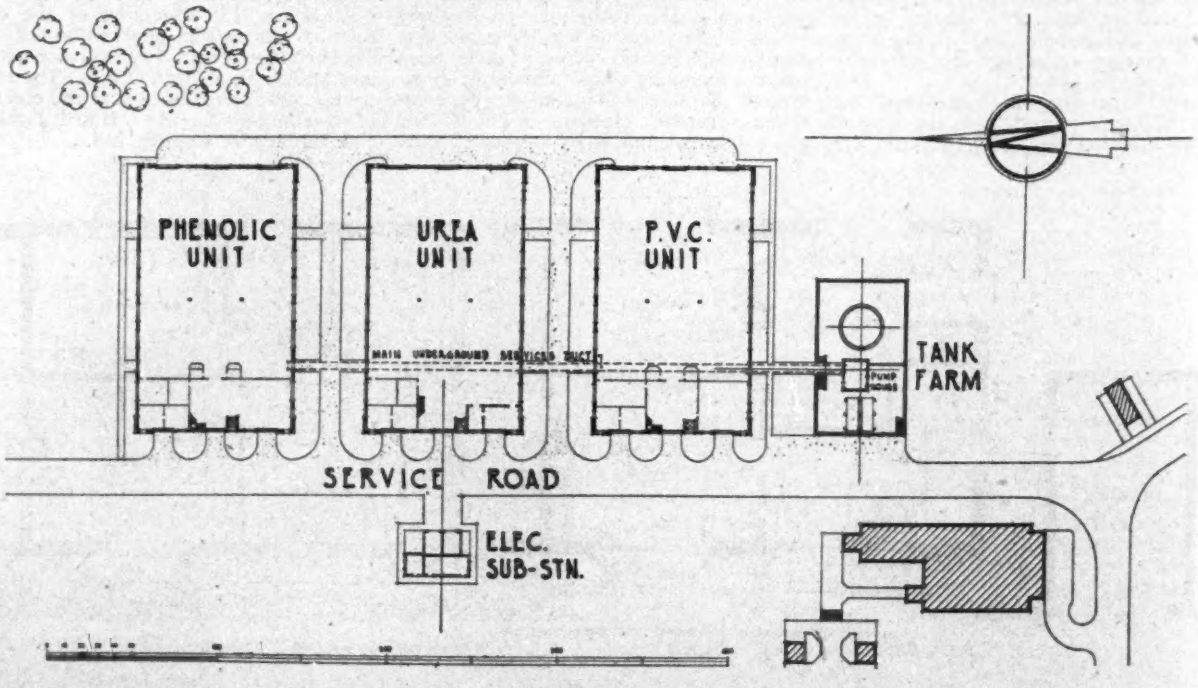
Detail of one of the three Factory Blocks. *Below:* **Ground-floor Plan.**

NEW FACTORY BUILDINGS, AYCLIFFE ESTATE, CO. DURHAM

J. WILSON HAYS, F.R.I.B.A., ARCHITECT

THE BUILDINGS ILLUSTRATED ARE the first of new factories on a large section of war-time munition works at the Aycliffe Estate of the North-Eastern Trading Estates, Ltd., in the County of Durham, taken over by Bakelite, Ltd., a number of the existing buildings of which have been converted into special units—offices, stores, workshops, laboratories. The site is near the new Aycliffe Town.

GENERAL: The scheme comprises three production units—Phenolic, Urea, and P.V.C., a tank farm and an electrical sub-station. The three units, each 150 ft. by 90 ft., are similar in construction and external treatment, but each is planned internally for the manufacture of its special product. Galleries for the support of highly specialised and modern machinery of Bakelite's own design are provided at each end of each block and deep basements are provided. The whole are connected by a main duct car-



rying all services, including Bakelite's own production pipes from the tank farm and pumphouse. Each block is provided with an electric lift.

CONSTRUCTION: The work was carried out in stages, the first being the erection of the skeleton of each block, pending the planning of the internals. This entailed considerable practical difficulties in special foundations and structural steelwork carrying the galleries, etc. The buildings are steel-framed with the horizontal members in the window heads filled in with non-load-bearing walling. The external 10½-in. cavity walls are of 4-in. internal leaf of concrete blocks made on the site, and a 4½-in. local brick outside leaf, all in cement mortar. The piers at the angles of the buildings have 9-in. external leaf. The horizontal joints of the brickwork are finished white and the vertical joints brick colour.

The roofs of the blocks are triple-pitched in "Ruberoid Deck" with long ranges of patent glazing all supported on lattice girders designed to carry production gear. All rainwater pipes are inside the building. All windows are metal. Doors are wood—double-sliding to the main doors at end. Reinforced concrete floors are grano. finished, except that there is special oil- and acid-resisting floor tiling to special rooms.

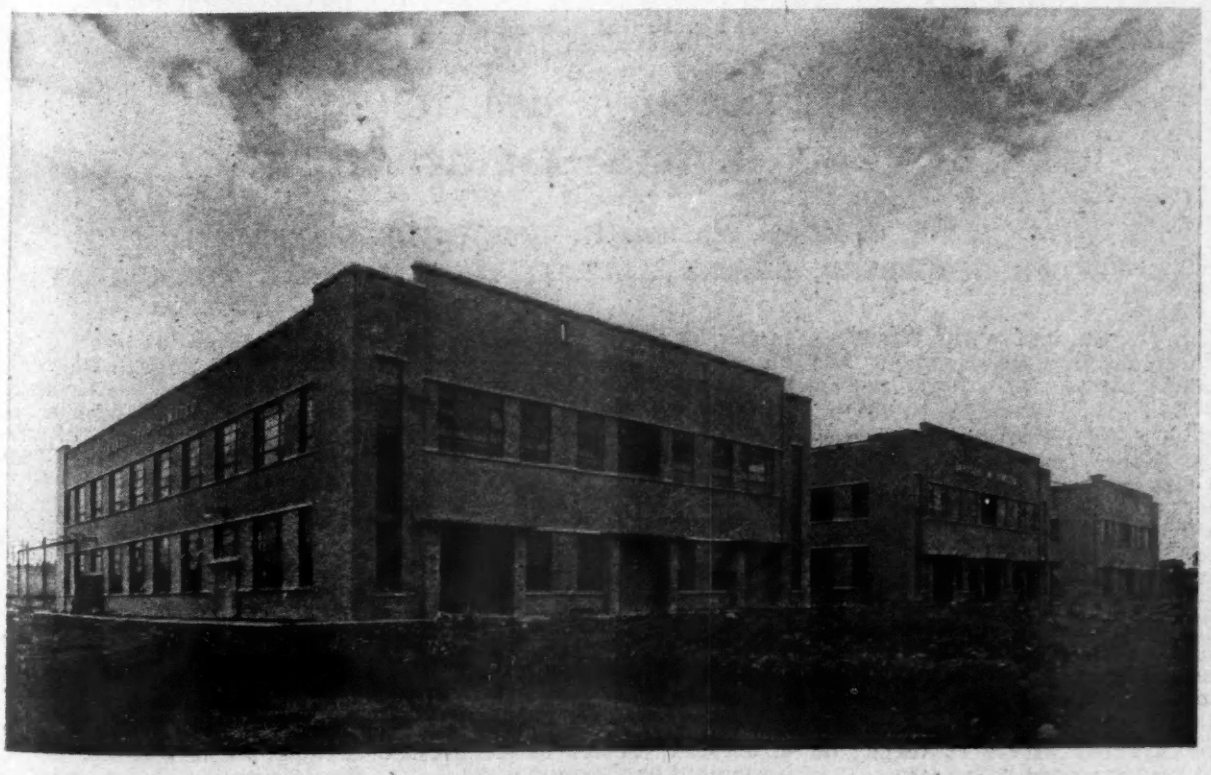
Internal partitions are carried out in 4-in. and 8-in. blocks made on the site, all finished flush joint to take paint, except the wall tiling to acid room. The whole of the internal work, including machinery, is finished in green and cream.

SERVICES: The methods of production demanded heating to special temperatures varying in different parts of each building, and incorporated with the heating installation are special ventilation and dust-extraction plants. The steam heating is from an existing boilerhouse. Special electric lighting is provided. Sanitary accommodation exists near the units.

An attempt has been made to provide a well-lit factory with easy circulation for wheeled traffic and to meet the desire of the North-Eastern Trading Estates, Ltd., on whose instructions the scheme was prepared, and Bakelite, Ltd., for a suite of dignified buildings in normal local materials.

The heating and ventilating consultant is Mr. E. A. Couzens, M.I.H.&V.E., of Birmingham. The electrical consultants are Messrs. R. W. Gregory and Partners, of Newcastle-on-Tyne. The contractors are Messrs. W. Pearson and Son, of West Hartlepool. Messrs. Bakelite's chief engineer is Mr. J. H. Chalk, M.B.E., of Birmingham, and the local engineering superintendent is Mr. G. Brownless.

THE PHENOLIC UNIT. The continuous phenolic moulding material production plant is here seen from the first-floor gallery. The conveyors and all moving parts are enclosed, giving an overall design of clean appearance.



Exterior view of the three new blocks.

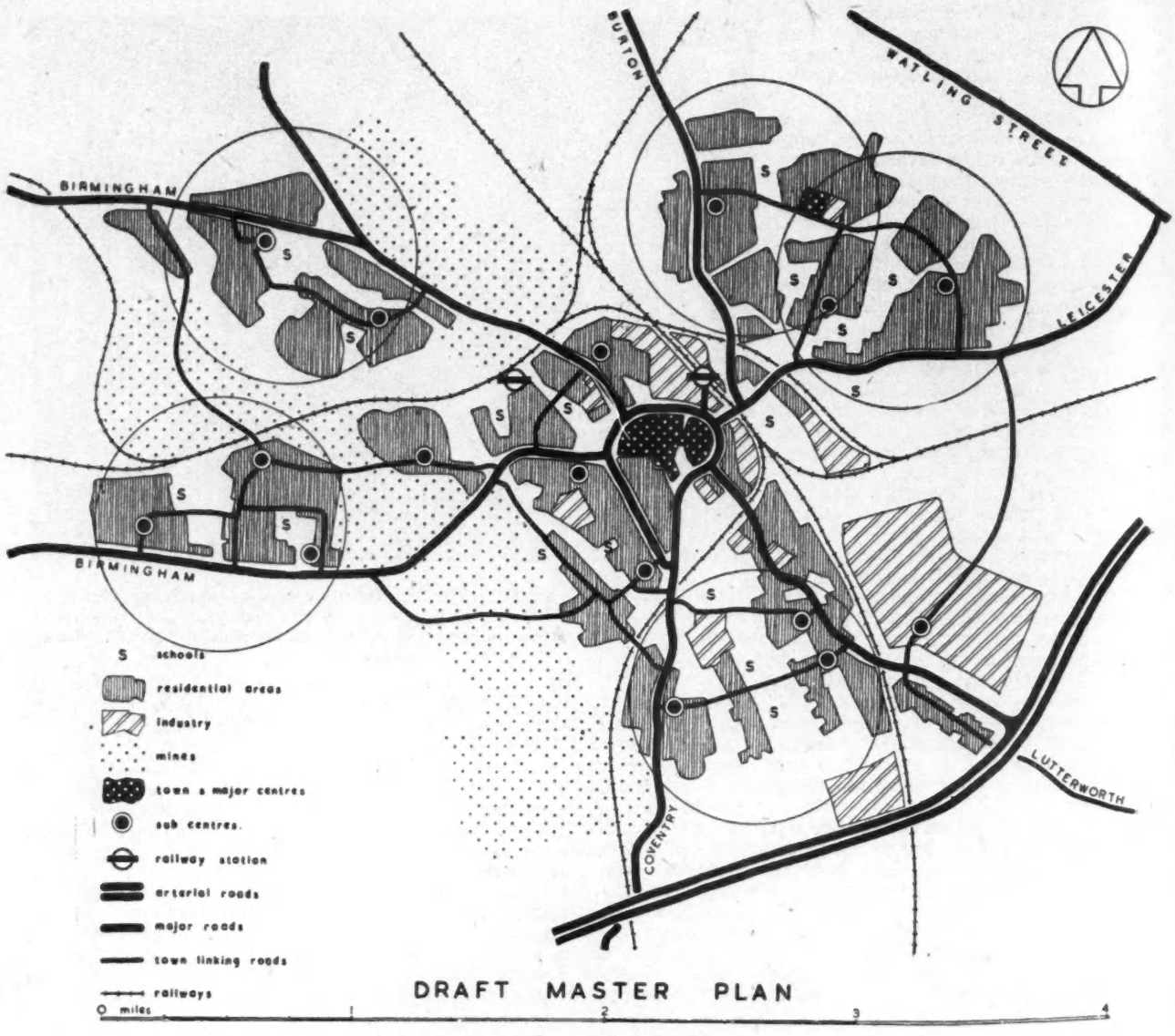


Fig. 1.—The Master Plan.

BOROUGH OF NUNEATON : REDESIGN OF THE WAR-DAMAGED TOWN CENTRE

R. C. MOON, A.M.Inst.C.E., BOROUGH ENGINEER
FREDERICK GIBBERD, F.R.I.B.A., A.M.T.P.I., TOWN PLANNING CONSULTANT

THE CENTRAL AREA OF THE WARWICKshire town of Nuneaton was badly "blitzed" by a heavy raid in 1941.

The Council instructed Mr. Frederick Gibberd, F.R.I.B.A., A.M.T.P.I., to prepare a plan for the redesign of the "blitzed" centre, in collaboration with Mr. R. C. Moon, A.M.Inst.C.E., the Borough Engineer. The plan is illustrated here.

The Council have applied to the Minister of Town and Country Planning for a Declaratory Order in respect of the area and a public inquiry has been held.

The existing town is divided up by a radial road pattern converging on the market place in the centre. It is further divided by railway lines, also on a radial pattern, meeting on the north-east side of the town. There are large mining areas on the west side.

DRAFT MASTER PLAN.—In the master plan (Fig. 1) the radial roads converging on the town centre from the east are linked up by a loop road. On the west an existing road is widened to act as a connection; thus the town centre is freed of through traffic.

Existing residential areas are grouped and expanded to form neighbourhoods. Their final population would be about 60,000. The major housing development will be on the east side owing to the extensive mining to the west. A new industrial estate is proposed on the south-east.

There are several pretty brooks or strays running through the town, and these are preserved and landscaped as sub-divisions between neighbourhoods.

THE WAR-DAMAGED CENTRE.—The designated area (Fig. 2) is 64.7 acres in area and is the scene of extensive war damage and is virtually the eastern half of the town centre.

The area lies between the Council House on the west and the L.M.S. Coventry line on the east and is a mixture of houses, shops, offices, light factories and workshops. The main shopping centre adjoins this area to the west, but escaped damage and has therefore been excluded.

Surveys of the areas were made and drawings produced in accordance with the Ministry of Town and Country

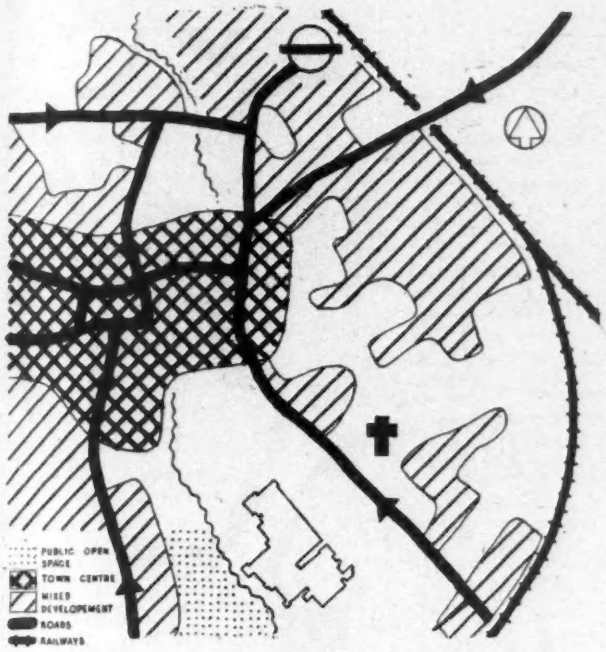


Fig. 2.—Diagram of Central Area as existing.

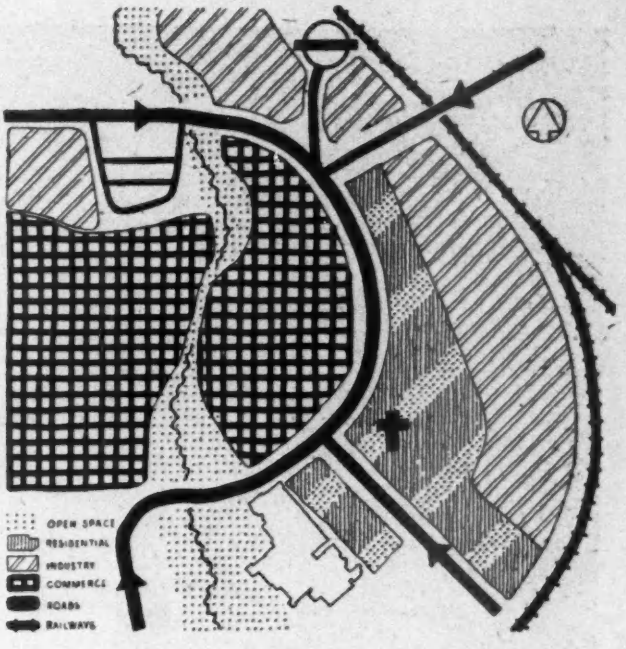


Fig. 3.—Diagram of Central Area Proposals.

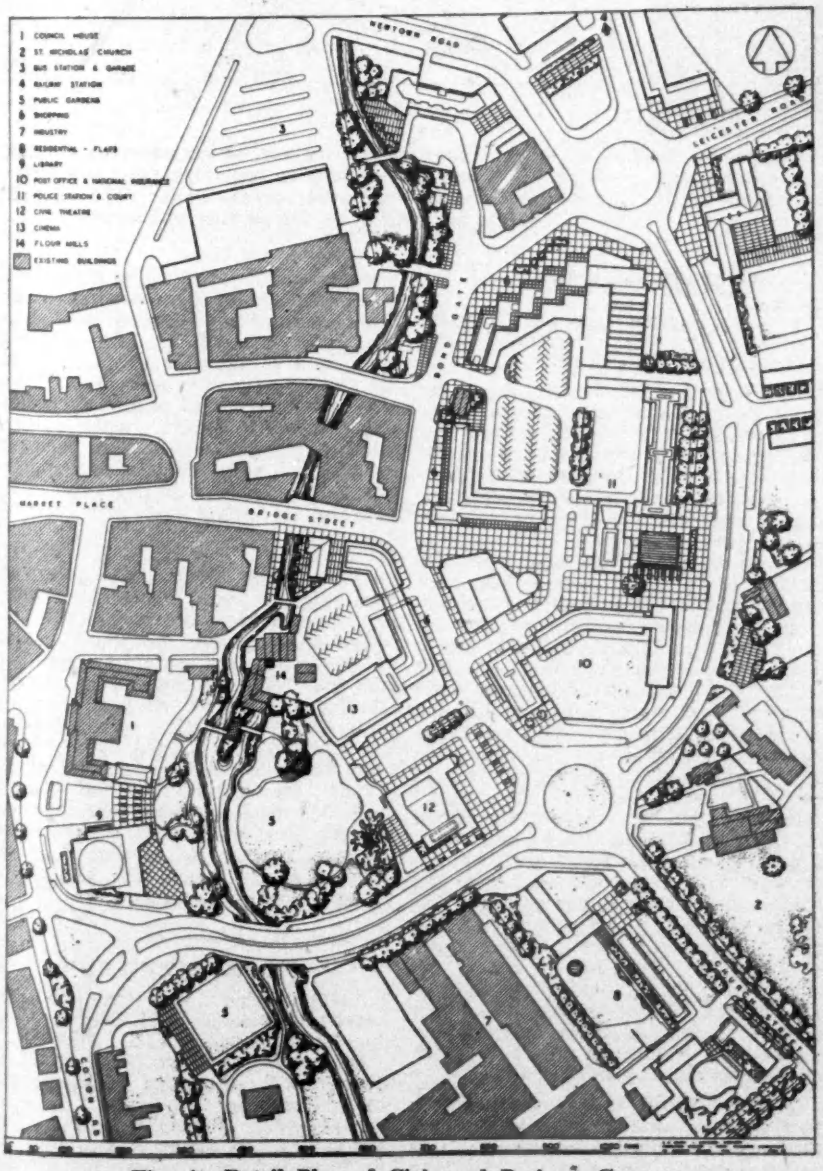


Fig. 4.—Detail Plan of Civic and Business Groups.

Planning Circular No. 12. In order to solve the traffic problem, four half-hour origin and destination surveys were carried out on the radial roads. The results showed that if a loop road connected up the radials round the eastern perimeter of the central area, the central market place would be relieved of about 30 per cent. of its present traffic.

BROAD PROPOSALS.—Fig. 3 shows the proposals and also shows how a loop road is provided connecting up the radials and providing east to west links. It would also form the bus route.

A bus station and garage is provided in the centre of this loop, opposite a short cut to the market place, and with pedestrian ways both to the town centre and the station.

A new station approach is formed, the existing road to the station being closed. The area inside the loop road is planned as a central area proper with new shopping, business, administrative and cultural centres. Outside the loop is a belt of high-density housing, including the church and open spaces. The area between this and the railway is planned as a light industrial estate.

The River Anker runs into the area from the south. This is developed as a landscape wedge running from the countryside to penetrate and form an integral part of the central area itself.

THE PLAN IN DETAIL.—Fig. 4 (supplemented by the photograph of the model, Fig. 5) shows the central area in detail. The principle in placing the new public, administrative and commercial buildings has been to site them as two inter-related groups, whose functions would be complementary.

The groups consist of buildings arranged around open spaces, with motor traffic circulating behind them. Compositions are built up between the facades of the buildings and the paved

Fig. 5.—View of the new Town Centre from the S.W. In the foreground is the Civic and Cultural Group with Library, Art Centre and Cinema. Beyond is the Post Office, Police Court and Shop Group.

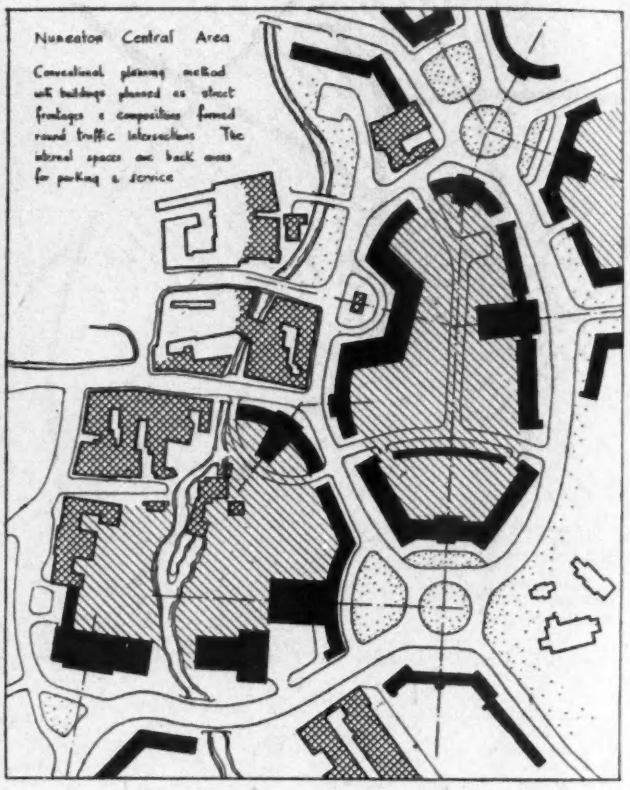

Nuneaton Central Area
Conventional planning method with buildings planned as street frontages & compositions formed round traffic intersections. The internal spaces are back areas for parking & service

Fig. 6.—The conventional method of planning the Central Area. Buildings are planned as street frontages and compositions formed round traffic intersections. The internal spaces are back areas for parking and service.

or garden areas between them; the opposite planning technique to the conventional one of grouping buildings round the traffic intersections. (The sketch 6 was drawn to make the comparison clearer. It shows the common method of treating the main roads as building frontage with principal buildings on the axis of traffic intersection; the spaces behind being used for service roads and parking, and not forming part of the visual picture.)

One group, civic and cultural, is planned round the river, hitherto shut in behind the backs of buildings. It includes the existing Council House, a new library, an art centre and cinema. An existing 19th-century flour mill, a tall building in blue brick of robust design, is retained to form part of this group.

The other group is administrative and commercial. It is planned round an internal road and pedestrian way, and includes the police court, post office, national insurance building and shops. This area is an extension of the market place shopping centre.

Although these groups are in precinctual form, traffic is not entirely excluded. Service roads and car-parks are provided, but in such a way that they do not disturb the areas either functionally or visually.

The existing mediæval church and the churchyard is left on its own to be a dominant element on the loop road, rather than an attempt to relate it to new buildings which would have tended to spoil its scale.

BOOK REVIEW

STONE AND MARBLE CARVING. By Alec Miller. Pp. 96. Illustrated. (John Tiranti, Ltd.) 12s. 6d. net.

Professor Richard Garbe, R.A., explains that he was moved to contribute his foreword to this book by the fact that the author "is, at once, a craftsman of long experience in the practice of sculpture, a writer on the history of sculpture, and a delightful lecturer on various aspects of sculpture—a distinguished combination indeed." He adds that "unfortunately, much nonsense has been written of late years about sculpture by those who have no instinct for work well done; and who, in their desire to justify their technical incompetence, or their blindness towards the craftsman's point of view, have taken refuge behind the much abused term—art. The crude and primitive type of carving has been given high place, and archæological interest confused with artistic excellence." Admitting that the primitive carvers of the remote past and the Africans of a later day "did their best," he caustically observes that "we are what we are, neither neoliths nor Easter Islanders, but Europeans of our own generation," and that "a competent carver, with a sense of integrity, will refuse to follow the new 'witch doctor phase of sculpture.' As for the current fashion to admire crudely shaped blocks of stone, he remarks that 'Nature gave us rocks to admire—man should give us sculpture.'"

This thoughtful and provocative preface forms a suitable introduction to a thoroughly technical book, invaluable to actual carvers, but also of absorbing interest to general readers who must often wonder exactly how sculpture is produced. Each step of the process is carefully described and justified here, all in clear and scholarly English—no small merit in a technical manual. Although Mr. Miller devotes a few pages to the work and methods of primitive, classical and mediæval carvers, with a bare reference to the Renaissance, he soon gets to grips with the actual contemporary practice and gives us 12 pages describing the various stones used for carving, noting that he has handled nearly all of them himself. Then follows a chapter on tools, again abounding in expert advice. But the most interesting chapters to a layman are those in which he describes in succession the whole process of executing five different pieces of carving: an inscription in incised lettering, a simple Gothic boss, a portrait in low relief, a child's head in the round, and a draped figure. These examples, illustrated by splendid photographs, are carved by the "direct method"; but Professor Garbe concludes this excellent book with a chapter on "pointing," that is, carving with the help of an instrument for taking and proportioning measurements.

M. S. B.

BOOKS RECEIVED

ARCHITECTURAL PRACTICE AND PROCEDURE. By Hamilton H. Turner. (London: B. T. Batsford, Ltd.) Price 18s.

DRAINAGE AND SANITATION. By E. H. Blake, C.B.E. (London: B. T. Batsford, Ltd.) Price 15s.

PRACTICAL PROBLEMS IN SOIL MECHANICS. By Henry R. Reynolds and P. Protopapadakis. (London: Crosby Lockwood and Son, Ltd.) Price 18s.

CORRESPONDENCE

"Trade Unionism and Production."

To the Editor of *The Builder*.

Sir,—From Mr. Coppock's letter in your last issue it is clear that by the mere repetition of outworn theories he is not in step with some of the more enlightened Labour chieftains. These men, mellowed by practical experience in state affairs, are beginning to question the efficiency of nationalisation. In fact, they already know that under its evil ægis both trades unionism and production must fall under the inexorable law of diminishing returns.

A. V. Stapleton.

41-45, High-street,
Southgate, N.14.

Non-Completion of Building Contracts.

To the Editor of *The Builder*.

Sir,—The article on Non-Completion of Building Contracts on page 310 of your issue for September 10 quotes a popular fallacy regarding the General Conditions of Contract of the R.I.B.A. Standard Form which was revised in January, 1947. Under the sub-heading "Extension of Time," there appears a statement that extension of time may be allowed for delay due to "any circumstances which are wholly beyond the control of the contractor or unavoidable." As I understand it, power is given to the architect to extend the period of contract on eight specified occasions only. The legal interpretation of *force majeure* would not cover such items as lack of labour or materials and yet under present circumstances the contractor is reasonably entitled to say these are beyond his control.

Maybe other readers have commented on this point and perhaps you would be good enough to "ventilate" the matter, particularly in view of the Joint Contracts Tribunal Practice Note No. 5, which recommends the addition of an 18A clause.

H. W. Selley,
Quantity Surveyor.

c/o Architect's Department,
County Hall, Newport, I.o.W.

⁂ A proof of this letter has been shown to "A.R.I.C.S.," who writes:—All contracts are construed by the Court upon the legitimate and common sense interpretation of the contract expressed by the general terms of the contract as a whole. If special circumstances of any kind whatsoever which may occur be such as fairly to entitle the contractor to an extension of time for the completion of the work, the architect should make a fair and reasonable extension of time.

General Conditions of Government Contracts for Building and Civil Engineering Works (Form ccc/wks/1) condition 28 (f) makes definite provisions for this happening.

Architectural Education.

To the Editor of *The Builder*.

Sir,—This month witnesses the receipt of prospectuses from Schools of Architecture and Building, with notices of dates of enrolment. All of them, except one which lies in front of me as I write, display complete and bland indifference to present conditions. The duration of these conditions, however indeterminate, is sufficient to place a totally different complexion on future qualificative functions of both architect and builder—if indeed they are to function any longer. The exception referred to possesses the following salient features:

The age of entry, formerly 16, is increased to 19 at the request of the medical profession.

The course is three years with ample provision for relegations.

No one apparently has had the temerity to hint even at any finality of standard or qualification. *The First Year* consists of lectures on the probable interpretation of official English and the study of forms and form drafting. The study of the art of assessing what an Assessor would assess is also reviewed. *The Second Year* is slightly more comprehensive. First dealt with is the Art of Approach—the relationship between the compilers of forms and those who seek to fill in what they anticipate will be the result of filling in. Next, the Social Factor—the best methods of entertaining compilers of forms so that those who anticipate results may be afforded the privilege of filling in one or more forms which they anticipate will be productive of result. This year also takes in the study of productive culinary and bibulous processes and the art of restorative hopefulness and the study of golf and other games all connected with the Art of Approach and tentative accomplishment with particular stress on diplomatic lessons in handicaps.

Lectures are interspersed with visits to the various Ministries to ascertain the applicable nature of the Form which has been filled in. Although the staff (and incidentally staffing difficulties appear considerable) have been informed of the planned system relating to Forms, the results are not illuminating. There is a prize fund, but, owing to the complete inability so far of any student to benefit, the surplus accumulative interest has been allocated to a necessary sick benefit for the staff. A prize was just missed by one student for the best collection of British Standard Specifications and M.o.W. directives and forms, owing to one or two omissions, which was astonishing in view of his prowess as a philatelist at school.

The Third Year is given up entirely to the legal problem of architectural intestacy and study of instructions to heirs and assigns on the method of coping with the totally unexpected result of the form filled in.

This is all the information which you, Mr. Editor, can be asked or expected to give me space for. A concluding note, however. An inspector of the Ministry who generally accompanies a visiting board in its visits to Schools of Architecture and who was the sole survivor in a recent visit expressed grave doubts as to the relevance of the syllabus to Architecture as officially designated in his day and he wondered what the resultant qualification would be. He was informed that since there was, and is, a complete shortage of material and no incentive to overcome it, no possible harm could accrue from the study of drafting and use of forms, since Design and Construction through consequent disuse would never be likely to influence the efficiency of the younger generation of either architects or builders.

However, if those who teach and those who are taught, together with our legislators, are satisfied, there is nothing more to be said, written or done.

Niel Martin-Kaye.

43, Doughty-street, W.C.1.

HOUSING COSTS ANALYSED

FIRST REPORT OF GIRDWOOD COMMITTEE

AMONG the conclusions reached by the Committee on House-Building Costs in its first Report* are these:—

(1) Whereas in 1938-9 the average cost of the local authority three-bedroom house in England and Wales was about £380, the average cost of its post-war counterpart—a bigger and better equipped house—is estimated to be £1,242 (or £1,400 including site costs and professional fees).

(2) Average size of local authority houses immediately before the war was about 800 sq. ft. compared with an average in 1947 of 1,029 sq. ft. (including an outbuilding of some 95 sq. ft.). It is estimated that the increased size of the post-war house with addition of an outbuilding have accounted for about £200, or one-sixth of the total cost.

(3) Decline in productivity in the building industry since 1939 led to an increase of some 45 per cent. in the number of man-hours required to build a house in 1947, and a resultant extra cost of about £150 in the case of a typical three-bedroom house. This increase in man-hours was the equivalent of a 31 per cent. decline in output.

(4) Main contributory causes of loss of productivity are given as: Shortages of materials and labour; effects upon the quality of labour of the war, the wartime systems of "cost-plus" contracting and of payment by results; greater attractiveness of other industries, and increase in average age of building operatives; serious overloading of building industry due to a larger volume of building work of all kinds being put in hand after the war than could be undertaken efficiently with the building resources available. (This overloading had been the fundamental cause of the shortage of materials and labour for house-construction); lack of individual effort; and the bad weather of early 1947.

(5) Despite the apparent discrepancy between maximum selling prices hitherto fixed for houses built under licence and the estimate of the average cost of local authority houses, there was no conclusive evidence "that private enterprise has been able to build houses more cheaply than local authorities or their contractors."

(6) The information available to the Committee at the time of its inquiry also suggested that no saving had been obtained by building houses by direct labour.

(7) No evidence of excessive profits on house-building contracts since the war.

The Committee, under the chairmanship of Mr. J. G. Girdwood, C.B.E., was appointed by the Minister of Health in June, 1947, "to consider and keep under review the costs of house-building and to make recommendations." The Report deals with the cost of houses built immediately before the increase in building trades wages which took effect as from November 16, 1947. This increase occurred concurrently with the introduction of the new system of incentive payments, whose effect on house-building costs could not be fully assessed at the time of the Committee's inquiry. The Committee recommends:—

(1) That in all future housing contracts the price fluctuations clause should be confined, so long as it remains in use, to a small number of price-controlled materials, the value of which constitutes an appreciable proportion of the total cost of materials, and that the only increases or decreases allowed under the clause should be those arising directly from officially authorised changes in the controlled prices.

* The Cost of House Building. First Report of the Committee of Inquiry appointed by the Minister of Health. H.M.S.O., 1s. 3d. net.

(2) That since the increase in the size of post-war houses and the more elaborate equipment have not only added to the cost of house-building—they constitute the largest item in the increased cost which is subject to Government influence—and have created additional demands on scarce materials and labour, the policy regarding standards of accommodation and equipment of new houses should be reviewed in the light of present-day conditions.

Discussing productivity, the Committee says that the restoration of a satisfactory level of output in the building industry in the future will depend on a proper adjustment of supply and demand and upon sufficient and regular supplies of materials and labour being available for the work undertaken. It adds: "Until the problem of personal effort is solved also, output cannot be satisfactory and loss of productivity is inevitable."

The report emphasises the close relationship between house-building costs and the general level of wages and prices, and states: "To-day, as after the 1914-18 war, the level of building costs is governed by the general trend of prices, and there can, therefore, be no ground for assuming that the cost of building will fall within any given period after the end of the war. The fall in the price of houses after the First World War was a result of changes in the general economic situation, namely, a slump, and a decline in the price of imported goods. Whether a similar change in the present economic situation is likely to occur cannot be foreseen, but the policy of full employment is intended to exclude the possibility of a slump. Should import prices continue to rise, the cost of house-building may tend to rise also."

The members of the Committee are: Chairman, Mr. J. G. Girdwood, C.B.E. Controller of Canteens (Ministry of Supply) during the war, director of William Beardmore and Co., Ltd.; Mr. D. N. Chester (Nuffield College, Oxford); Mr. D. H. Daines (Secretary to London Labour Party); Mr. C. H. James, R.A., F.R.I.B.A., and Mr. W. K. M. Slimmings, chartered accountant.

SALE OF LAND AT INFLATED PRICES

CENTRAL LAND BOARD AND POWERS OF PURCHASE

THE Chairman of the Central Land Board, SIR MALCOLM TRUSTRAM EVE, K.C., told a meeting of the Law Society at Brighton, on September 22, about the steps which the Board have been authorised by the Minister of Town and Country Planning to take, in view of the fact that in many cases land is deliberately being sold at its full value, including development value.

One of the objects of the Town and Country Planning Act, 1947, is that land should be sold at its value for the use to which it is being put at the time of sale. Then, when development takes place, and the developer pays a charge to the Board, he will not have paid for the development value twice over. In addition, the seller will have his claim on the £300,000,000 fund.

Sir Malcolm said he was afraid that the inflated prices being paid at the moment would be passed on to whoever occupied the building when the land was developed, or alternatively, that purchasers would not come forward, and approved and urgent development would be held up. The Board had therefore asked the Minister for his approval in principle to the exercise of their powers under the Act to buy land. This would be done in cases where they were satisfied that it was deliberately being offered for sale or had been bought at a price considerably above existing use value, including cases where the transaction was coupled with an assignment to the purchaser of the vendor's claim on the £300,000,000. Owners would be informed that the Board did not wish to buy land if an undertaking were given that it would be sold at its existing use value. Where agreement was not arrived at, however, the Board could be authorised in appropriate circumstances to buy the land compulsorily.

They had hoped to be able to operate the Act without the threat or the use of land purchase, at any rate in the early days, but they had already plenty of evidence that many owners were selling land on terms unfair to prospective developers.

Following are the texts of the letters on this subject exchanged between the Chairman of the Central Land Board and the Minister of Town and Country Planning.

From Sir Malcolm Trustram Eve.

My dear Minister,

The Central Land Board are disturbed about the fact that land is still being sold—deliberately in very many cases—at a sum equivalent to a price inclusive of development value. The Board accept as generally accurate the statement in a recent letter to the "Times" that "the professed object of the Act to secure that land shall be freely transferred at its existing use value is just not being achieved."

It is becoming increasingly common (to quote the same letter) for "the purchaser to pay what was thought to be a fair pre-Act price and to take an assignment of the vendor's right to claim compensation for depreciation arising as a result of the Act." If the pre-Act price of a plot were £200 and the existing use value is £50, the owner is selling at £200 and granting an assignment of his claim on the £300,000,000. The purchaser then becomes liable on development to pay to the Board a development charge of about £150. This makes the *immediate* price payable for the land a sum of £350, with a *later* right to be recouped whatever is payable out of the fund of £300,000,000.

There is a very real risk in transactions of this type that one of two things may happen. The inflated immediate price paid for the land will be added to the cost of the building and will be passed on to the person who is to occupy the building in a higher sale or letting price. Alternatively, developers will refuse to buy the land at such a price and approved and urgent development will not be carried out.

The Board, your Ministry, and also you and I myself have used every possible chance to explain to the land-owning and land-buying public the importance of the establishment of existing use value. I am reminded of a story told of one of our judges. He was being addressed by a young advocate, accustomed to jury cases and who repeated himself unduly. The judge warned him once that he was not addressing a jury and then, rapping on his desk, said to the Usher: "Usher, turn on the light over the jury box. Mr. —— doesn't believe me." The public doesn't seem to believe us and more light is essential.

The main sanction provided in the Act to establish existing use value on sales is the power given to certain public authorities to purchase the land. Section 43 gives to the Central Land Board, subject to your approval, certain powers to buy land by agreement and by compulsion. (For convenience, I set out at the end of this letter the wording of the first two sub-sections.) A sum of £100,000 has been allotted for this purpose in the Vote for the Central Land Board up to April, 1949.

As a first step (and in the earnest hope that further steps on a large scale will not be necessary) the Board have decided to ask your approval, in principle (within the limits of their present Vote), for the purchase by the Board under Section 43 (1) by agreement of land where the Board is satisfied that the land is deliberately being offered for sale or has been bought at a price considerably above existing use value, including cases where this is coupled with an assignment to the purchaser of the vendor's claim on the £300,000,000. Your further approval would, of course, be sought on each individual case, when a full statement of the facts and circumstances would be sent to you. In appropriate cases the owner would be informed that the Board would not wish to purchase the land if an undertaking were given that his land would be sold at existing use value. Reference would also be made to the powers of the Board for compulsory purchase.

The Board had hoped to operate the Act without the threat or the use of land purchase—at any rate, in the early days. But they are satisfied that many owners are, as a matter of considered policy, advertising and actually selling land on terms which will make the Act difficult or impossible to operate and which are not fair to prospective developers. They feel bound, therefore, to take this early action, if you approve.

(Signed) MALCOLM TRUSTRAM EVE.

Section 43. *Sub-section* (1). The Central Land Board may, with the approval of the Minister, by agreement acquire land for any purpose connected with the performance of their functions under the following provisions of the Act, and in particular may so acquire any land for the purpose of disposing of it for development for which permission has been granted under Part III of this Act on terms inclusive of any development charge payable under those provisions in respect of that development.

Sub-section (2). If the Minister is satisfied that it is expedient in the public interest that the Board should acquire any land for any such purpose as aforesaid, and the Board are unable to acquire the land by agreement on reasonable terms, he may authorise the Board to acquire the land compulsorily in accordance with the provisions of this section.

From Mr. Silkin.

My dear Chairman.

Thank you for your letter of 17th September.

It is, I absolutely agree, vital to the operation of the Town and Country Planning Act that land should be bought and sold at existing use value. I myself know of cases where approved development has already been hindered by the price asked for the land, although planning permission has been granted.

I am in entire agreement with the policy proposed in your letter and I hope that the Board will exercise to the full extent necessary the powers conferred upon them by Section 43 of the Act. When the Bill was before Parliament it was expressly stated that these powers had been included for this very purpose.

I shall, of course, have to consider on its merits any particular proposal that the Board may submit to me for my approval under the Section.

(Signed) LEWIS SILKIN.

LIGHTWEIGHT BUILDING MATERIALS

A Paper Read at the British Association Meeting

THE following paper* on "Lightweight Building Materials" was presented by MR. T. W. PARKER, M.Sc., Ph.D., F.R.I.C., of the Department of Scientific and Industrial Research, at the British Association meeting at Brighton on September 14:—

In the traditional brick and tiled house, about 130 tons of assorted materials are required for the purpose of giving shelter and comfort to the occupants. The greater part of this derives from mineral products, so that for every 100,000 houses built in a year, more than 10,000,000 tons of finished products have to be dug out of the earth, processed, transported, and built. In so far as lighter units can be used, they will automatically result in the saving of power, either mechanical or manual. Moreover, in the larger type of building, the weight of the superstructure introduces heavier loads to be carried by the foundation and also a need for greater strength in the lower storeys to carry the dead load of the storeys above; problems which would be reduced if the buildings were lighter in weight.

It is, of course, necessary to inquire whether there would be any disadvantages in using lighter materials. Leaving aside the questions of whether it would be possible to produce enough of them and whether production costs would be materially affected, the main point to be considered is whether there would be any adverse influence on stability, durability, weather resistance, fire hazard and the type of comfort conditions characterised by thermal and sound insulation. There is no single simple answer to this because of the rather wide variety of lightweight materials which are involved, but very broadly it may be said that these functional properties can be satisfied, providing some departure from traditional design and methods is adopted, the extent of departure varying with the type of lightweight material.

In some respects, and particularly as regards thermal insulation, lightweight materials have a marked advantage over the denser materials. At present there is a pronounced drive in the building industry to improve the thermal efficiency of space heating. Part of the solution requires improvement in thermal insulation and the economic way to do this is by use of the lightweight materials. One may say indeed that the present preoccupation with thermal efficiency is a more potent factor in fostering the development of lightweight materials than any of the other factors already mentioned, and it may well continue to be the most powerful factor in influencing the future direction of development of the lightweight materials.

Classification.

Thatch, which falls in the lightweight group, has been used for centuries, as have cavity fillings of reeds or straw or other light materials. Breeze blocks, lightweight clay and lightweight plaster products, fibre insulation boards, cork boards, slag wool products, and so on, have all been used in some quantity for many years. The subject is not, therefore, new, although, because of the desire for improved thermal insulation, it is topical. The kinds of lightweight material can be classified in a few broad groups. These are:—

Materials which have some structural properties. The simplest description is that of materials which can be used in brick or block form to give a masonry type of structure or can be cast "in situ" to serve the same purpose. They can also be used on flat roofs and in the construction of floors. Lightweight concretes and lightweight burnt clay products are characteristic of this group, but lightweight gypsum products or even lime-based products also enter. Use of these materials involves the least departure from the traditional methods of building. Their insulation value per unit thickness is not as high as most of the materials described in later groups but because they are used to perform more than a simple insulation function, they are, in any event, used in greater thickness, so that the overall insulation effect is much the same. They retain the merit of sufficient thermal capacity to have some thermal storage effects, a point which is relevant when the heating is of the intermittent type and which is sometimes overlooked.

Materials used in sheet form for exterior or interior linings. Some, though not all, of the materials in this group contribute materially to thermal insulation, but they also perform other functions. Asbestos cement sheets, for example, are used externally for rain exclusion, whilst plasterboard, fibre insulation board, etc., used internally, also provide the base for the decorative finish, whether of direct paint or distemper, or of plaster followed by paint, distemper, or wallpaper. In some cases they may be used as a permanent shuttering for cast "in situ" concrete. They were used quite extensively before the war, mainly on ceilings, but the development of factory assembly of units of construction (*i.e.*, partial prefabrication) has increased their importance as they help to solve the problem of reduction of site work.

From the insulation point of view the use of the inner lining type has advantages, especially when the heating system is of the intermittent type. The normal method of fixing to a wall or ceiling is by nailing to battens, thus leaving a narrow cavity between the sheet and the wall. This form of low thermal capacity lining then permits of a more rapid heating of the space from cold than would solid surfaces of higher thermal capacity.

While lightness in weight per unit volume of these sheet materials aids both thermal insulation and ease of handling, there are limitations in weight below which troublesome defects are apt to arise. Since the surfaces are exposed, or at most are protected only by a relatively thin sheet of plaster, they need to be sufficiently robust to withstand accidental impacts when the building is occupied. They have also be strong enough to withstand the various processes of handling and installation and to prevent the fixing-nail heads being easily pulled through them. It is necessary, also, that they should not be disintegrated by moisture, such as might arise from condensation.

Materials used for filling cavities. Materials of this class include loose granular products and fibrous products either loose, or enclosed in paper or scrim as a blanket, or weakly bound by some cementing medium into "bats." The loose granular or fibrous media fulfil only one function, that of insulation; the remainder are sometimes used for specialised purposes, such as sound absorption or fire resistance, but more often are also placed purely for thermal insulation.

The use of such materials for insulating the walls of traditional-type building has some disadvantages, and it is probably easier to use materials of the other two groups for this purpose. In the roofs, however, there is a stronger tradition to use one material for one function, *i.e.*, an outside cladding to provide weather resistance, another material for the structural framework, and a third for the interior finish. The addition of a fourth to provide thermal insulation is, therefore, within the tradition, and materials of this group fit well within this scheme. There are certain conveniences in using blanket or "bat" forms rather than loose granular forms for this purpose.

Since only one function is required, there are fewer limitations in regard to extreme lightness in weight or other properties, such as strength. The desirable properties other than insulation are of a negative character—for example, that the materials do not react harmfully with other materials, that they do not disintegrate in humid conditions (whether from chemical or physical instability or from tendency to mould growth and so on), or that they do not give rise to unpleasant odours, or noxious or inflammable gases.

The materials may have a wider use when the building method departs from the traditional. This point is considered in more detail in the next section.

Recent Developments and Possible Failure Trends.

The building industry is large and contains a great number of small units. Its traditional background is strong. For these reasons there is no doubt that lightweight materials which can be introduced with the minimum disturbance of craft techniques and with the retention of as much as possible of the adaptability of the traditional materials to architectural design will have the advantage. It has already been mentioned that materials of the first group are promising in this respect.

The greatest development within this group has been in the field of lightweight concretes. There are a considerable number of ways of making lightweight concretes, all having points of interest, and it would be impossible to mention them even in slight detail within the short space available. One group may, however, be noted, that of the aerated concretes, on which lightness in weight is achieved by the presence of a multitude of small air or gas bubbles in the mass. This may be achieved either by adding aluminium powder which liberates hydrogen bubbles by reaction with the alkali of the cement, or hydrogen peroxide and bleaching powder may be used to produce oxygen bubbles. Air bubbles can be introduced either by adding a foaming agent and then whipping in a special mixer or by adding a prepared foam in a normal mixer. By suitable modification of the mix, it is possible to adjust the weight over a wide range from about 20 lb. per cu. ft. up to the weight of normal cement mortar at about 140 lb. per cu. ft. This material has not yet been developed on any great scale in this country, apart from its somewhat different use as an infill in the aluminium bungalow, although one of its earliest commercial uses was here. On the Continent, and particularly in Sweden, it is used extensively, and it can be said confidently that it ought to be one of the main future developments in building materials.

If similar developments in lightweight clay products could be made, the resulting

* Crown copyright reserved. (Published by permission of the Director of Building Research.)

materials would have one considerable advantage, that of greater stability to volume changes on wetting and drying. Concrete products need a certain amount of care in this respect to avoid cracking troubles. Lightweight clay products have, of course, been available for many years, although not in any considerable quantity. What is required is a lightweight product which would compete in price with the lightweight concretes and with existing clay bricks, and which could be made easily and in quantity.

Lightweight gypsum products can be made with great accuracy in size and trueness of surface; this leads to the possibility of saving time in building by reducing the complications of the application of the plaster finish. They are weak, however, and the edges and corners are rather easily damaged in handling. They are normally only practicable for interior use in this country because of the sensitivity of gypsum to water. Since the available supplies of native gypsum are fully used for plasters and plasterboard (and for other non-building purposes), it may be concluded that developments in Great Britain in the near future are not likely to be great. On the other hand, the possibilities of this material for building in the Colonies should not be overlooked in those cases where natural gypsum is available.

The uses of the sheet materials of the second group have already been mentioned. The existing materials, when used in the orthodox way, are generally fixed to timber battens, which in turn are fixed by plugging (if on a solid background) or nailing (if on beams or joists). The prevailing shortage of timber has led to the development of alternative fixing methods, which so far, however, have been mainly directed to overhead fixings and mostly have made use of variations in fixing on light metal T-sections. So far as new materials are concerned, the main development has been in the manufacture of boards from wood or other cellulosic waste bound with synthetic resin. There have also been developments in the use of straw. A method of making a slab of straw enclosed in paper, developed originally in Sweden, is now being operated, though on a limited scale, in this country. Straw can also be used as a raw material in the manufacture of fibre insulation board, thus utilising a home-produced material. Since either all or part of the raw materials, or the finished fibre insulation boards, of current manufacture, have to be imported, there are obvious advantages in inquiring further into the use of straw. The latter is, of course, a wider matter than building materials alone; other industrial uses are also involved.

The third group, *i.e.*, loose fills, blankets, flexible bats, etc., also need to be considered both from the point of view of materials and methods of use, even though they have the single function of thermal insulation. Choosing two for particular discussion, mention may first be made of *glass wool*. Developments in this industry have led to a wide range of products becoming available, of which a fairly simple type consisting of a blanket of glass fibre enclosed in waterproofed paper is of most immediate interest. It is a convenient form for draping over the tops of joists in roof spaces or below the floorboards of ground floors, but in fixing to vertical surfaces or to the undersides of sloping surfaces it is necessary to provide additional supports, by means of straining wires or other devices.

The main synthetic mineral-fibres are either glass wool, slag wool, or "mineral" wool, the latter having a composition rather similar to slag but being made from natural rocks instead of remelted slag. All are of the glassy type. The natural mineral-fibre is, of course, asbestos, which is not glassy. During the war, shortage of asbestos in Germany led to attempts to make products similar to asbestos-cement sheets but using slag wool fibre. These, however, met with little success, being more brittle and having a tendency to warp. So far as is known, even under the pressure of this shortage, Germany did not produce a suitable direct alternative to asbestos in asbestos cement.

The second material chosen for mention is *vermiculite*. This is a natural mica-like mineral having the characteristic of exfoliating under heat to a very lightweight product. The weight per cubic foot of exfoliated particles of size, say ¼ in.-½ in. may be as low as 4-5 lb. The main source before the war was in Montana in the United States, and it was developed for loose insulation, lightweight concrete and acoustic plasters in the building industry, and also found uses in paints and in furnace insulation. In this country it had a limited use for acoustic plasters. Since the war there has been more active effort to develop its use here, since a new source of vermiculite has become available from Palibora, South Africa. However, its price has remained very high, £20-£30 per ton being the order. Quoting by weight gives, perhaps, rather an unfair picture, since in building it is more often volume than weight which counts. But even when suitable adjustments are made to compare by volume or by equivalent insulation, the price remains higher than comparable materials. The proposal to use it in making lightweight concrete does not seem justifiable technically, because certain of the properties are unfavourable and even if they could be modified it seems unlikely to yield a product having any real advantage over aerated concrete, discussed earlier. Its use in acoustic plasters is well known, but the scope for sound absorbents is relatively limited. There remain, then, loose insulation and certain proprietary uses, such as that of a recent development of a sprayed-on plaster, in which it is apparently necessary to use vermiculite as an aggregate because it imparts some properties necessary to the success of the operation which, it is said, cannot be produced with other aggregates.

So far as its use as a loose fill is concerned, the thermal conductivity is of the order of 0.4 B.Th.Us./sq. ft./hr./1°F./in. Quoted figures range from 0.25-0.9 depending on source, grading and exfoliation, but 0.4 can be taken for the purpose of illustration. This value is not very different from that for glass wool, slag wool and fibre insulation board. The latter is usually applied in buildings in ½-in. thicknesses, while a common thickness for the mineral wool blankets is 1 in. In terms of insulation, therefore, the comparison should be made with a loose fill ½ in.-1 in. thick. This, however, is scarcely a practical proposition; the minimum practical application is probably of the order of 2-in. thickness. If we assume that at present prices it is not worth while to consider it unless the price is not greater than 3d./sq. ft., and also assume an apparent density of 5lb./cu. ft. for the exfoliated material, then the price per ton of exfoliated products should not be more than about £23. For a density of 8 lb./cu. ft., the price should not be greater than about £14 per ton.

It was mentioned earlier that materials of Group 3 become more useful the more the building method departs from the traditional, and this needs some amplification. In general, traditional construction means building up on the site with relatively small units, the latter being of a porous nature such as bricks. The details of such construction have been developed over centuries in such a way as to obtain stability, durability, rain resistance, etc., with the porous materials used. As has been explained, most of the materials perform more than one function.

Characteristic non-traditional construction assembles larger units in a factory and reduces the time required in building on the site as a result of having larger areas ready made and also by using dry methods of fixing them together. In order to avoid heavy plant, the factory units need to be as light as possible. In practice, it seems necessary to make these units of a number of materials, each having a specific function, for example a structural frame, an outer weather resisting skin, a thermal insulator, and an inner lining. The outer skin differs from the outer skin of traditional building because it is usually impermeable. But this leads to a much greater need for careful design of joints because an impermeable skin allows rain to stream down the face, instead of being partly absorbed, and thus increases the severity of the conditions at joints. Impermeability also means that water vapour from inside cannot escape and special measures may, therefore, be required to introduce a vapour barrier to avoid condensation troubles. The low thermal capacity of some such constructions also makes a continuous heating system very desirable in winter months. These examples are given to show that a change of this type needs a considerable study over the whole subject of the behaviour of buildings Traditional experience gives little guide in this case and it is necessary to rely on scientific study. The success, say, of the aluminium bungalow is a tribute to the strides which building science has made. It is a good example of the type of non-traditional construction described, having an outer impermeable skin of aluminium, an insulator in the cavity (in this case a very light aerated cement) and a sheet material (plasterboard) inner lining.

Conclusion.

This review is far from comprehensive. It has been necessary to omit many interesting and important points and to give all too brief reference to others. But it is hoped that sufficient has been given to indicate the scope and promise of lightweight materials and to show from present developments where the scope for future progress lies. There is no doubt that lightweight materials can give real help in economy in design and in efficiency and comfort of the finished building.

A PLANNING ACT PROBLEM

EVERY one of the Walsall Corporation's 1,360 title deeds, some of which date back to 1820, and cover more than half of the borough, will be the subject of very careful research so that claims under the Town and Country Planning Act can be made, a record established, and a system relative to the payment of development charges under the Act evolved.

The town clerk, Mr. W. S. Brookes, having made it clear that he cannot give an assurance that all claims will be completed by the prescribed date, March 31, the Council is informing the Central Land Board and the Ministry that the time allowed for such an extensive research is insufficient.

TOWN AND COUNTRY PLANNING ACT, 1947

By NORMAN P. GREIG, B.A., Barrister-at-Law, F.R.San.I., F.I.Arb., etc.

13.—STATUTORY INSTRUMENTS (REGULATIONS AND ORDERS)

COMMENTS have frequently been made regarding the large number of these, necessitated by the Act. Some sixty-odd matters under the Act are prescribed by Regulations in the form of Statutory Instruments (the new name for Statutory Rules and Orders, or S. R. and O.); a kind of secondary or delegated legislation steadily increasing, and the subject of much criticism from many sources, for many years past. Of these Regulations and Orders, brief mention must be made of the most important. Some have already been treated at length in the pages of *The Builder*, e.g., *The Town and Country Planning (Control of Advertisements) Regulations*, 1948 (*The Builder*, July 23, 1948): *The Town and Country Planning (Use Classes) Order*, 1948, and a similar Order concerning *Use Classes for Third Schedule* purposes, both treated in *The Builder*, June 11, 1948.

THE TOWN AND COUNTRY PLANNING (GENERAL) REGULATIONS, 1948 (S.I. 1948, No. 1380). Regulations 3, 4, 5, and 7 (1) prescribe the *time* and *manner* in which certain notices may be given and claims made under the Act. Regulations 6 and 7 (2) adapt the provisions of the Act as to *enforcement notices* (SS. 23 and 24 and Article 2) to other notices under the Act. Regulation 8 adapts certain provisions of the Public Health Act, 1936, dealing with recovery of expenses and to notices under the present Act.

Regulation 9 fixes at 5 years the period within which land which has ceased to be "*operational land*" (Section 84 and Article 10) of statutory undertakers can be developed without payment of development charge. Regulation 10 gives the procedure for referring disputes as to what is "*prevailing use of land*" to the Central Land Board and the Minister. Other Regulations provide for proceedings in respect to (1) *development plans* and *compulsory purchase Orders* and (2) compulsory purchase Orders and Orders extinguishing rights of way (Article 5) being taken concurrently; while Regulation 13 is concerned with the transference of applications under the Restriction of Ribbon Development Act, 1935, not finally determined on the appointed day, to local planning authorities.

THE TOWN AND COUNTRY PLANNING (LOCAL AUTHORITIES' LAND: EXCEPTIONS TO SECTION 82) REGULATIONS, 1948 (S.I. 1948, No. 1461). This Statutory Instrument came into operation on July 1, 1948, and was mentioned in Article 10. It excepted the following classes of land from the provisions of Section 82, viz.: (1) Land held for "*commercial purposes*," i.e., land held for the purpose of any activity (including restaurants, theatres, concert-halls, holiday camps and airfields) with the intention of making profit therefrom, whether that object is the main one or not; (2) Land held solely or mainly for the revenue derived therefrom; (3) Land held for *industrial estates;* (4) Land held by local highway authorities for working and winning minerals for highway purposes; and (5) Land which a local authority has acquired *at restricted value* and not yet developed by that authority. But a proviso has the effect of bringing classes (1) to (4) back into the Section under the circumstances mentioned in it: the proviso also excepts (1) land held for the purpose of any enactment relating to housing, (2) land held for the purpose of a gymnasium, public library, museum or art gallery, a cemetery, burial ground, or crematorium. Land for these purposes then (all of which has been acquired at *unrestricted value*) falls back into the Section and so is excluded from a claim under Part VI (Article 7) and from a development charge.

THE TOWN AND COUNTRY PLANNING (BUILDING PRESERVATION ORDER) REGULATIONS, 1948 (S.I. 1948, No. 1766). These Regulations came into operation on August 10, 1948. They deal with the *form of building preservation Orders* which are made under Section 29 (Article 3), and the procedure to be followed in connection with the submission and confirmation of such Orders. The *form* of the Order is given in a Schedule. Regulation 4 provides that a local authority desiring to submit an Order (under Section 29) to the Minister for confirmation must transmit to him "the sealed Order in duplicate with any plan annexed thereto, a copy of such Order and plan (if any) and a statement of the *grounds* on which the local authority consider that the Order should be confirmed." They must also send a copy of the Order, plan and statement to the council of the county district in which the building is situate; but if the authority making the Order *is* the council then to the local planning authority for the area. The local authority must then publish in at least one local newspaper a notice of the submission of the Order and include in the notice a statement that the Order and plan (if any), or certified copies, will be open for inspection at a certain place and time. Objections are to be sent in writing to the Minister within 28 days from the date of the publication of the advertisement. The Minister *must*, before deciding whether to confirm, take into consideration objections received in time. Further elaborate procedure follows which could serve no particular purpose by its inclusion here. The Regulations contain the provisions of Part III of the Act relating to permission to develop land, to applications for such permission and to enforcement notices.

THE TOWN AND COUNTRY PLANNING DELEGATION (LONDON) REGULATIONS, 1948 (S.I. 1948, No. 1459). These were explained in Article 12.

THE TOWN AND COUNTRY PLANNING (DEVELOPMENT PLANS) REGULATIONS, 1948 (S.I. 1948, No. 1767). These Regulations, made by the Minister under Sections 8, 10, 11 and 111, came into operation on August 16, 1948. They deal with the *form* and contents of development plans under Part II of the Act (Articles 1 and 2), and with the procedure to be followed for bringing them into operation. A definition of "development plan" is given by Reg. 2, viz:— "Development Plan" in relation to any area means the maps and written statements required . . . by Part II of the Regulations, and includes a development plan relating to any part of the area of a local planning authority prepared under Section 5 (5) or Section 7 of the Act, and *proposals for any alterations or additions to a development plan*. Part II of the Regulations specifies the maps and written statement making up the development plan, and with the First Schedule (which is in five parts) indicates the contents. Part III deals with procedure and contains provisions for the placing on sale of copies of development plans when operative. Part IV is concerned with the procedure where development plans are carried out at the same time as any in relation to *trunk roads* under the Trunk Roads Act, 1946, or the New Towns Act, 1946.

THE TOWN AND COUNTRY PLANNING (ENFORCEMENT OF RESTRICTION OF RIBBON DEVELOPMENT ACT) REGULATIONS, 1948 (S.I. 1948, No. 1520). The above, under Section 75 of the Act (Article 9), came into operation on July 1, 1948. This Section provides for the application of the enforcement provisions contained in Part III *to breaches, before the appointed day, of previous planning control* under the Acts of 1932 and 1943, which are repealed. The Regulations adapt the provisions of Section 75 to breaches, occurring before the appointed day, of the control exercised by highway authorities under Sections 1 and 2 of the Restriction of Ribbon Development Act, 1935, also repealed. The power of enforcement is given by the Regulations to local planning authorities as though the restrictions imposed by the above Act were part of previous planning control.

THE TOWN AND COUNTRY PLANNING (TREE PRESERVATION ORDER) REGULATIONS, 1948 (S.I. 1948, No. 1436). These Regulations made under Section 28 of the Act (Article 3) deal with the *form* of the preservation Orders and the *procedure* to be followed in connection with the submission and confirmation of these Orders.

THE TOWN AND COUNTRY PLANNING (DEVELOPMENT CHARGE EXEMPTIONS) REGULATIONS, 1948 (S.I. 1948, No. 1188). These were put into operation on July 1, 1948, and were made by the Minister under Section 69 (2) (b) of the Act (Article 8). Their purpose is to specify the operations and uses of land which are exempt from development charge.

THE TOWN AND COUNTRY PLANNING (GENERAL DEVELOPMENT) ORDER, 1948 (S.I. 1948, No. 958), which came into operation on July 1, 1948, is a general Order, made under Sections 13, 14, 16 and 114 of the Act, applicable to all land in England and Wales, and provides *for the grant of permission for the development of land under Part III*. It deals with *development permitted by the Order itself* and contains the procedure for the withdrawal of the permission in particular circumstances. Further matters treated are:—applications for permission to local authorities; development near trunk roads and development not in accordance with the development plan approved under Part II of the Act. Among other things, the Order provides for the keeping of a *register* of planning applications available for public inspection (see Article 1).

THE TOWN AND COUNTRY PLANNING (MAKING OF APPLICATIONS) REGULATIONS, 1948 (S.I. 1948, No. 74). These Regulations, which came into force on July 1, 1948, and were made by the Minister under Sections 73 and 102 of the Act, describe the procedure for two important matters, viz.:—(1) Application to the local planning authority *for permission to develop land;* and (2) to the Central Land Board to determine, confirm or vary a development charge (see Article 8).

Note. Copies of the above Statutory Instruments, as well as any others, are obtainable from H.M. Stationery Office at varying prices.

(To be concluded.)

IN PARLIAMENT

Cost of House Building.

CAPT. CROWDER asked the Minister of Health if he had yet received the Report of the Girdwood Committee, which had been considering the cost of housebuilding, and when it was to be published. MR. MARPLES asked a similar question.

MR. BEVAN said that the Committee had submitted a report which would be published before the end of September.

*** The report is now published, and a summary is given on page 391.

Local Authorities' Loans.

MR. GAMMANS asked the Minister of Health whether, in view of the fact that a percentage of houses for private ownership up to a value of £2,000 had now been granted, he proposed to seek an amendment to the Small Dwellings Act to enable local authorities to lend money on property to a greater value than £1,500.

MR. BEVAN said the question whether an increase should be made in the limit of market value of a house on which money might be lent by a local authority had been noted for consideration in connection with future housing legislation.

Technical College.

SIR WALDRON SMITHERS asked the Minister of Works when the Building Trades Technical College at Sydenham was opened; what was its cost; and if he would make a statement as to the extent it had been used and the number of trainees with the average length of stay since it was erected.

MR. KEY said that the buildings erected at Sydenham for a Ministry of Labour Building Trades Training Centre were not used for that purpose owing to the decision to reduce the number of training places. The cost of erection was about £212,000. The buildings had been allocated in part for a technical school and the remainder for industry.

Committee of Review.

MR. MARPLES asked the Minister of Works how many reports on output in the building trade had been published by the Committee of Review which was to be set up under the Working Rule Agreement for Building Trades Operatives in the London District, which was signed on February 27, 1946.

MR. KEY said he understood that no reports had been published by the Committee of Review set up by the National Joint Council for the Building Industry.

MR. MARPLES asked the Minister of Works when the Committee appointed by him on June 5, 1947, to keep under review the prices of building materials would be making their recommendations.

MR. KEY said that this was a standing Committee which made recommendations to him from time to time in response to requests for advice.

Building Workers in London.

MR. PLATTS-MILLS asked the Minister of Works how many building workers were employed in the Greater London area; how many were unemployed; how many were employed on new housing; and how many on other kinds of house building, including war damage repairs.

MR. KEY said that the latest available figures of employment were for May, 1948. At that date the number of male operatives aged 16 and over employed in the building and civil engineering industries in the London Region totalled 200,300; of this number, 40,500 were employed on new housing and 90,500 on other housing work including war damage repair. The number of insured males aged 14 to 64 registered as unemployed in these industries on August 16, 1948, was 4,594. This included men who, although registered as unemployed on that day, were in process of transfer from one job to another, or were under submission to jobs. Unemployed clerical and administrative workers were also included.

SMOKE ABATEMENT

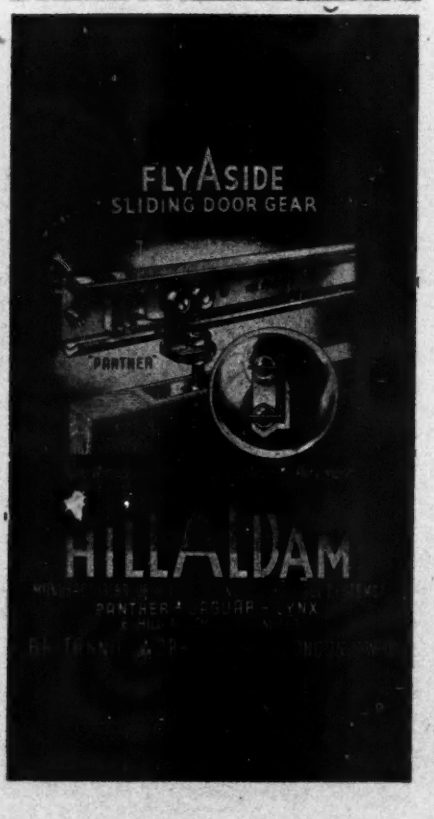
CONFERENCE AT CHELTENHAM

LORD SIMON OF WYTHENSHAWE has been elected as the new President of the National Smoke Abatement Society, it was announced at the annual conference of the Society at Cheltenham on September 29.

In the course of his presidential address, the retiring President, Sir GEORGE ELLISTON, M.C., M.A., D.L., said: The last two years—or more precisely, two and a half years—have seen some of the most important advances yet made towards the ending of the smoke evil. Foremost of all, perhaps, is the report on Domestic Fuel Policy of an advisory committee of the Ministry of Fuel and Power, under the chairmanship of our incoming President, Lord Simon of Wythenshawe. Although the report necessarily covers a wider field than smoke prevention it shows unmistakably how the whole problem of the domestic uses of fuel, both from the viewpoints of national policy and of the householder, is firmly and inextricably bound up with the policy of abolishing smoke from our homes.

During these two and a half years we have also seen action based on policies advocated by the Society. We have seen new measures for preventing smoke approved by Parliament and placed on the statute book. True, they are so far only local Acts, but they embody new principles and are most significant.

We must not, however, lose sight of the most serious factor of all that concerns us—the waste and damage due to smoke and the enormous loss of coal involved in the production of this smoke.



This yearly loss of fuel, our D.S.I.R. friends estimate, is equivalent to 2½ million tons of coal, and to it must be added the greater loss contained in the invisible gases formed with smoke. From the fuel economy point of view smoke is like an iceberg—the more serious part cannot be seen. As we were told at Edinburgh last year, these losses may be several times greater than the loss of visible smoke, so that there must be a total loss equivalent to about 10 million tons of coal a year.

MR. CHARLES GANDY, Chairman of the Executive Council, in a report on the year's activities, stated that a deputation had recently met Lord Citrine and Mr. Hacking, of the British Electrical Authority, to discuss the problems of atmospheric pollution from generating stations. "The deputation felt," said Mr. Gandy, "that the Authority were fully sympathetic and they were satisfied that the means being employed in the new stations to prevent the emission of grit could not, in our present stage of knowledge, be bettered. With respect to the removal of sulphur acid gases, the deputation was assured that the Authority were carrying out research in order to determine the most practicable means to prevent the emission of sulphur, without imposing an undue burden on the industry."

A series of "Progress Reports" contributed by local authorities and other bodies from many parts of the country were reviewed by MR. ARNOLD MARSH, General Secretary, who pointed out that two of the reports were excellent examples of how groups of local authorities should get together for tackling their special problems. In one case the authorities adjacent to the great new power station at Carrington, near Manchester, were co-operating in a scheme for the systematic observation of the condition of the atmosphere (with special reference to grit and sulphur acid gases) now, before the station began to operate, so that any deterioration afterwards could be statistically noted. In the other case the authorities on Thames-side, after suffering for many years from dust nuisance due to cement manufacture, had now set up a joint investigation committee. From Bristol came a report of a new kind of smoke control committee set up by the City Council to co-ordinate the smoke abatement interests of the different city departments — planning, reconstruction, health and housing. A further report dealt with good progress made during the year in central and district heating schemes.

A report on the smoke abatement clauses of the Coventry Corporation Bill was of particular interest because for the first time the opinion of electors had been sought directly on a proposal for setting up smokeless zones. The vote—27,000 to 11,000 in favour—was a significant endorsement, said Mr. Marsh, for progressive smoke abolition rather than mere smoke abatement.

Smoke Prevention and Town Planning.

MR. J. NELSON MEREDITH, City Architect of Bristol, in a paper on "Smoke Prevention and Town Planning," said: "Any town could and should be a pleasant place in which to live, yet few of our towns ever approach those standards of amenity that make people consciously regard them as pleasant places in which it is a privilege to work and live. It appears that many are simply places to work in and then to escape from. We grumble about the vast sprawl that has taken place in our large towns, but can we wonder at this when we realise that

the simple needs of our people, i.e., healthy air and sunshine for the children, clean surroundings to give a clean home and less household labour, a garden where the grass is green and flowers will flourish, are non-existent? "

Pointing out that town planning cannot be carried out without vision, Mr. Meredith said that when the architect planned either the most meagre dwelling or a Civic Centre he visualised the final achievement and suggested various materials accordingly.

"Yet," he concluded, "in how many of our building works of the past has this been materialised? Look at the town halls in Manchester and Birkenhead, once cheerful and bright buildings, now covered in a shroud. Look at St. George's Hall in Liverpool, once a beautiful light brown colour, now a dark mass having lost practically all resemblance of the beauty of Darley Dale stone. Town planning affects every individual in the country, so it behoves everyone to strive for the prevention of smoke."

NEWS IN BRIEF

L.M.B.A. President as Guest of Honour.

Mr. D. C. Burgess, president of the London Master Builders' Association, has been invited to be the guest of honour of the London Rotary Club at a luncheon in the Connaught Rooms on January 12.

Booklets for Surveyors.

The Institute of Quantity Surveyors, which has recently opened its headquarters at 98, Gloucester-place, W.1, has issued a booklet on "Rules and Syllabus of Examinations," price 1s., and another on "Scale of Professional Charges," price 6d.

The Planning Acts and Industry.

The Federation of British Industries, 21, Tothill-street, S.W.1, has issued a booklet entitled "Industry and the Town and Country Planning Act, 1947." It is a simplified general guide to complicated legislation and is designed to call attention to the points at which the Town and Country Planning Act affects industry. The price is 1s.

Commercial Mahoganies.

The Forest Products Research Bulletin No. 18, "Commercial Mahoganies and Allied Timbers" (1938), has been reissued by the Stationery Office, price 2s., or 2s. 3d. post free. It summarises information on the various timbers marketed as mahogany, describing their salient characteristics, geographical distribution and sources of supply. Illustrations enabling the timbers to be identified are also included.

Direct Labour Criticised.

An investigation is to be conducted at Bradford into the reasons for a £28,215 increase on an original estimate of £114,576 for the erection by direct labour of 96 houses on the corporation's Buttershaw estate. At a recent meeting of the city council, the Labour majority agreed without opposition to a proposal by the Conservatives that a special subcommittee be appointed for the purpose. Moving the proposal, Mr. H. J. White said the Conservatives had warned the Labour group that direct labour would not be able to compete with private enterprise, and that costs would be greater and the houses would be built much more slowly. Ald. H. W. Semper, Labour leader, said he welcomed the proposal and insisted the investigation should be a full one.

BETTER PROSPECTS FOR BUILDERS' FOREMEN

LONDON ASSOCIATION'S DINNER

ALTHOUGH in the past only a few people had benefited from the London Builders' Foremen's Association, there was now a prospect of a new short and long term policy all over the country, said MR. N. HANNEN, vice-president of the L.M.B.A., at a Ladies' Night Dinner and Dance, given by the L.B.F.A. at the Connaught Rooms, Great Queen-street, Kingsway, on September 24. Mr. Hannen, in giving the toast of the Foremen's Association and its president, Mr. W. F. Simpson, spoke with approval of the fact that after many years in which they had drifted apart the two associations were now meeting more often. The L.M.B.A. wanted views from the Foremen's Association on how incentives were working and the conditions under which foremen were employed.

MR. SIMPSON, responding to the toast, said that the Association was trying to maintain a high standard and to uphold the dignity of the profession.

An appreciation of the opportunities which the L.M.B.A. provided for joint committee meetings to discuss the needs of the foreman was expressed by a past president of the L.B.F.A., MR. A. G. DAVIES, when he proposed the toast of "The L.M.B.A."

MR. BURGESS reminded the associations that the L.B.F.A. was only 76 years old. Men's minds became attached to the fact that 75 years was the average lifetime, and dwelt more on the past than the future, he said. They must be careful that the Association did not fall into the same condition. In speaking of the link between the two bodies, he remarked that there was now the dawning of a realisation that there could be no isolated existence for men or nations. Whenever there was a call forward the L.M.B.A. would be behind the L.B.F.A.

A toast to the ladies was proposed by MR. R. G. HUNTINGDON. MRS. D. C. BURGESS replied.

No-1
METALLIC LIQUID
Unequalled for waterproofing Cement Renderings and all Mass Concrete; and for waterproofing and dust-proofing Concrete Floors.
SOLD UNDER GUARANTEE
from per gallon 5/- according to quantity
SPECIAL PRICES FOR LARGE CONTRACTS
Send for Booklet No. 30
GEORGE LILLINGTON
AND COMPANY LIMITED
5,7 LONDON BRIDGE ST., S.E.1. HOP 0234-5
75.89

TRADE NEWS

New Water Heaters.

Messrs. Aidas Electric Ltd., Sadia Works, Rowdell-road, Northolt, Greenford, Middx., have issued leaflets describing the full range of U.D.B. (electric) and C.E.L. (coal-electric) type "Sadia" water heaters now in production, and including details of the latest models with built-in cold water storage tanks.

Two Ventilating Units.

Designed to provide an efficient and reliable method of heating and ventilating, and supplying clean and humidified air, modern "Air-flow" ventilating units are manufactured as two distinct types, one for use in conjunction with an existing hot-water or steam system, and the other as an entirely self-contained electrical unit. They are manufactured by Messrs. Fenton, Byrn and Co., Ltd., Swains-road, S.W.17.

New Plastics Information Service.

A new information service dealing with the application and fabrication of laminated plastics will be inaugurated shortly by the Design Section of De La Rue Insulation, Ltd. This Design Section, under the direction of Mr. S. P. Jordan, A.R.I.B.A., was set up after the war to assist architects, designers, builders, shop fitters, etc., on any problem related to the use of "Formica" and other De La Rue laminated plastics.

Thawing by Electricity.

A portable electrical apparatus designed to thaw out frozen waterpipes has been manufactured by Runbaken Electrical Products. There is no need to locate the point of freeze-up. The apparatus, which will work off any 200-250 volts A.C. mains supply, is attached to the frozen tap and the other side of the frozen section by means of two leads. The standard equipment is designed for lead, copper or iron pipes up to one inch in diameter. Apparatus for thawing larger diameter pipe sections can be obtained to order.

NATIONAL PAY WEEK

NEW RULE FOR BUILDING INDUSTRY

WITH effect from midnight on Sunday, October 3, 1948, the pay week in the building industry throughout the country will be from midnight Sunday to midnight Sunday, the pay day being Thursday in each week.

Upon the introduction of the new rule in the London District, pay will be made as follows:—Friday, October 1, wages earned for the week ended Tuesday, September 28. Thursday, October 7, wages earned from leaving off time on Tuesday, September 28 to midnight on Sunday, October 3 inclusive. Thursday, October 14, wages earned for the week ended Sunday, October 10.

Employers are recommended to make such arrangements with their operatives as may be reasonable to enable the changeover to take place with the minimum of hardship. It is suggested that in appropriate circumstances this might be effected by an advance of pay.

RATES OF WAGES IN THE BUILDING TRADE [AS FROM JULY 11, 1948]

(Every endeavour is made to ensure accuracy, but we cannot be responsible for errors)

KEY TO SCHEDULE OF GRADE RATES.

Grade Classification,	A	A1	A2	A3
Craftsmen	2/9½	2/9	2/8½	2/8
Labourers	2/3	2/2½	2/2	2/1¾

Town.	Grade.
Aberavon	A
Aberdare	A
Abergavenny	A
Abingdon	A2
Accrington	A
Addlestone	A
Aldeburgh	A3
Aldershot District	A2
Alfreton U.D.	A
Alnwick	A1
Altrincham	A
Amble	A1
Amersham	A1
Ammanford	A
Andover	A2
Ardingly	A2
Arundel	A2
Ascot	A2
Ashby-de-la-Zouch U.D.	A
Ashby Woulds U.D.	A
Ashford (Kent)	A2
Ashford (Middlesex)	A
Ashington	A
Ashtead	A
Ashton-under-Lyne	A
Aspatria and Brayton	A2
Atherstone (parts of)	A1
Aylesbury	A2
Aylesby (Yorks)	A
Aylesham	A3
Bagshot	A2
Bakewell U.D.	A2
Banbury	A2
Barnard Castle U.D.	A1
Barnoldswick U.D.	A1
Barnsley	A
Barrow-in-Furness	A
Barrow-upon-Soar R.D. (exc. Thrussington A2)	A
Barry	A
Basford R.D. (exc. Willough-by-on-the-Wolds A2)	A
Basingstoke	A2
Bath	A
Batley	A
Baxterley	A1
Beaconsfield & District	A1
Beamish	A
Bearl	A
Bearpark	A
Beccles	A3
Bedale R.D.	A
Bedford	A
Bedlington	A
Bedwas	A
Beeston & Stapleford U.D.	A
Belper U.D.	A
Belton	A
Berkhamsted	A1
Berrington	A1
Berwick District	A1
Beverley	A
Bexhill-on-Sea	A2
Biggleswade	A2
Billericay	A1
Billing	A
Billingham U.D.	‡A
Bilsthorpe	A
Birchington	A2
Birkenhead	*
Birmingham C.B.	†A
Bishop Auckland	A
Bishop's Stortford	A1
Bispham	A
Blackburn	A
Blackpool	A
Blackwell R.D.	A
Blaydon U. D.	A
Blidworth	A
Blyth	A
Bognor Regis	A2
Boldon U.D.	A
Bolsover U.D.	A
Bolton	A
Bourne End	A1
Bournemouth District	A1
Bracknell	A2
Bradford	A
Bradford-on-Avon	A2
Braintree	A2
Breconshire, County of	‡A3
Brent Knoll	A2
Brentwood	A
Bridlington	A
Brierfield	A
Brighouse	A
Brighton	A1
Bristol	A
Broadstairs	A2
Bromsgrove U.D.	A
Brough	A
Broughton (Cheshire)	A
Buckley	A
Bungay	A3
Burnham-on-Crouch	A3
Burnley	A
Burton-on-Trent C.B.	A
Bury	A
Bury St. Edmunds	A3
Buxton	A1
Byfleet	A1
Calder Valley	A
Cambridge	A
Cannock U.D.	A
Canterbury	A2
Cardiff	A
Cardiganshire, County of	‡A3
Carlisle	A
Carmarthenshire, Cnty.of	‡A3
Carnarvonshire, Cnty of	‡A3
Carnforth	A
Castleford	A
Caterham	A
Chapel-en-le-Frith	A1
Charmy Down	A
Chatham & District	A1
Cheadle (Staffs) R.D.	A
Chelmsford	A
Cheltenham	A1
Chepstow	A1
Chertsey	A
Chester	A
Chesterfield M.B.	A
Chesterfield R.D.	A
Chester-le-Street U.D.	A
Chichester	A2
Chippenham (inc. Chippen-ham Within and Harden-huish)	A2
Chorley	A
Clacton	A1
Cleethorpes	A
Clevedon	A1
Cleveleys	A
Clitheroe	A
Coalville U.D.	A
Cobham (Surrey)	A
Colchester	A
Colne	A
Colwyn Bay	A1
Congleton	A1
Consett	A
Conway	A1
Cornwall, County of	‡A2
Coventry C.B.	A
Cranbrook	A2
Cranleigh	A2
Crawley (Sussex)	A2
Crewe	A
Cromer	A1
Crowborough	A2
Cuckfield	A2
Dalton-in-Furness	A
Darlington District	A
Darwen	A
Deal	A2
Denbigh Town	A2
Derby C.B.	A
Devizes	A2
Devon, County of	‡A2
Dewsbury	A
Didcot	A2
Diss	A3
Doncaster C.B.	A
Dorking	A1
Dorset, County of (except-ing Poole and Wimborne A1)	A2
Dover	A2
Dovercourt	A1
Driffield U.D.	A1
Droitwich M.B.	A1
Dudley M.B.	A
Dunstable	A
Durham City	A
Eastbourne	A1
E. Glam. & Mon. Val.	A
East Grinstead District	A2
Eastwood (Notts.) U.D.	A
Ebbw Vale & District	A
Edenbridge	A2
Ely	A3
Epping	A
Exeter	A1
Fakenham	A3
Falmouth	A2
Fareham	A
Faversham	A2
Felixstowe	A1
Filey U.D.	A1
Fleetwood	A
Flint	A
Folkestone	A2
Frinton	A1
Frome	A1
Gainsborough R.D. (Mid. pt.)	A2
Gateshead	A
Gillingham (Kent)	A1
Glossop	A
Gloucester	A1
Gloucestershire, Cnty. of	‡A2
Godalming	A2
Goole M.B.	A
Gosport	A
Grantham M.B.	A1
Gravesend	A
Great Yarmouth	A1
Grimsby (Yorks.)	A
Grimsby R.D. (Lincs.)	A3
Guildford District	A2
Guilsborough	A1
Guiseley	A
Halesowen M.B.	A
Halifax	A
Halstead	A2
Haresfield	A1
Harlow	A1
Harpenden	A1
Harrogate	A
Hartlepool	A
Harwich	A1
Haslemere	A2
Hastings	A2
Hatfield (Herts.)	A
Haywards Heath	A2
Hemel Hempstead	A1
Henley-on-Thames	A2
Hereford	A2
Herefordshire, Cnty. of	‡A2
Herne Bay	A2
Hertford	A
Hexham U.D.	A
Heysham	A
High Wycombe	A1
Highworth	A2
Hinckley U.D.	A
Hitchin	A1
Hoddesdon	A
Horley	A2
Horsham	A2
Horwich	A
Huddersfield	A
Hull	A
Hunstanton	A2
Huntingdon (Staffs)	A
Ilkley	A
Ingatestone	A1
Ipswich	A
Isle of Sheppey	A2
Isle of Thanet	A2
Isle of Wight	A3
Jarrow M.B.	A
Keighley	A
Kendal	A
Kenilworth U.D.	A
Kettering M.B.	A
Keynsham	A
Kidderminster M.B.	A
King's Lynn	A2
Kingskerswell	A1
Kingsteignton	A1
Kirkham	A
Knaresborough U.D.	A
Knowle	A1
Lancaster	A
Leamington M.B.	A
Leatherhead	A
Leeds	A
Leicester C.B.	A
Leighton Buzzard	A2
Letchworth	A1
Lewes	A2
Lichfield M.B.	A1
Lincoln C.B.	A
Littlehampton	A2
Liverpool	*
Llandudno	A1
Llanelly	A
London	*
Long Eaton	A
Loughborough M.B.	A
Louth M.B.	A2
Lowestoft	A1
Loxton	A2
Luton	A
Lyneham (Devon)	A1
Macclesfield	A1
Maidenhead	A1
Maidstone	A1
Maltby	A
Maldon (Essex)	A2
Malvern U.D.	A2
Manchester	A
Manningtree	A1
Mansfield M.B.	A
March	A2
Margate	A2
Market Harborough	A1
Maryport	A
Matlock U.D.	A1
Melksham	A2
Melton Constable	A3
Melton Mowbray U.D.	A2
Merthyr	A
Middlesbrough	A
Middleton	A
Middlewich	A1
Milford Haven	A2
Morecambe	A
Morley	A
Mundesley	A2
Nantwich	A1
Nelson	A
Newark-on-Trent R.D.	A1
Newbury	A2
Newcastle-on-Tyne	A
Newcastle-under-Lyme	A
New Forest District	A2
Newmarket	A2
Newport, Mon.	A
Newport Pagnell	A2
Newton Abbot	A1
Northallerton Dist.	A
Northampton C.B.	A
North Shields	A
Norton Radstock	A1
Norwich	A
Nottingham C.B.	A
Nuneaton M.B.	A
Oakham U.D.	A2
Oldham	A
Ongar	A
Ormskirk	A
Ossett and Horbury	A
Oxford	A
Oxted	A1
Paignton	A1
Peterborough	A
,, Soke	A1
Pickering	A3
Plymouth	A
Pontefract	A
Pontypridd District	A
Portishead	A
Portland Stoneyards	A
Portsmouth	A
Port Talbot	A
Preston	A
Pudsey	A
Pulborough	A2
Radnorshire, County of	‡A3
Ramsgate	A2
Rayleigh	A1
Reading	A
Redcar B.	A
Redditch U.D.	A
Redhill and Reigate	A
Ripon	A3
Rochdale	A
Rochester	A1
Rotherham	A
Rugby M.B.	A
Saffron Walden	A2
St. Albans	A
St. Helens	A
St. Neots	A2
Salisbury City	A2
Salisbury Plain	A2
Sawbridgeworth	A1
Saxmundham	A3
Scarborough	A
Scunthorpe	A
Selby	A
Sevenoaks	A1
Sheerness	A2
Sheffield	A
Shipley	A
Shoeburyness	A
Shoreham	A1
Shrewsbury M.B.	A
Sittingbourne	A2
Skegness U.D.	A1
Skipton U.D.	A1
Sleaford U.D.	A3
Slough	A1
Smethwick C.B.	†A
Snettisham	A2
Somerset, County of	‡A2
Southampton	A
Southend-on-Sea Dist.	A
Southport	A
South Shields C.B.	A
Spalding U.D.	A2
Stafford M.B.	A
Staines	A
Stamford M.B.	A1
Stantonwick	A
Stevenage	A1
Stockport	A
Stockton R.D.	A
Stockton-on-Tees	A
Stoke-on-Trent C.B.	A
Stoke Orchard	A1
Stourbridge M.B.	A
Stourport U.D.	A
Stowmarket	A3
Stratford-on-Avon M.B.	A1
Sunderland District	A
Sunningdale	A
Sutton Coldfield M.B.	A
Swaffham	A3
Swanage	A2
Swansea	A
Swindon	A2
Swinton U.D.	A
Tamworth M.B.	A
Tenterden	A2
Tewkesbury	A1
Thames Haven	A
Thetford	A3
Thorpe Bay	A
Thurrock U.D.C. Area	A
,, North of, to Billericay	A1
Tilbury	A
Todmorden	A
Tonbridge	A1
Torquay	A1
Totnes	A1
Trowbridge	A2
Tunbridge Wells	A1
Tynemouth C.B.	A
Uppingham (Salop)	A1
Uttoxeter U.D.	A2
Wakefield	A
Wallsend B.	A
Walsall C.B.	A
Walsden	A
Walton-on-Naze	A1
Ware	A
Warminster	A2
Warrington	A
Warwick M.B.	A
Wellington R.D.	A1
Wells (Norfolk)	A3
Welwyn	A
Welwyn Gar. City	A
West Bromwich C.B.	A
Westbury	A2
Westcliff-on-Sea	A
Westerham	A1
Weston-super-Mare	A1
Weybridge	A
Weymouth	A2
Whitby U.D.	A1
Whitstable and District	A2
Wickford	A1
Widnes	A
Wigan	A
Wigton	A3
Willington	A
Wilmslow	A
Wilts. County of	‡A2
Winchester	A2
Windermere	A3
Windsor and Eton	A1
Wisbech	A2
Witham	A2
Woking (District)	A1
Wokingham	A2
Wolverhampton C.B.	A
Woodbridge	A3
Worcester C.B.	A
Workington	A
Worksop M.B.	A
Worthing	A2
Wrexham (incl. Cefn)	A
Wroughton	A2
Wylam	A
Wymondham	A3
York	A

* For Birkenhead, Liverpool, and London the rates are :—Craftsmen, 2s. 11d.; Labourers, 2s. 4d. In the case of London the rate beyond the 12-mile radius is :—Craftsmen, 2s. 10½d.; Labourers, 2s. 3½d.

† Plus 2d. per working day.

‡ This is the County rate and applies except where higher grades are stated.

NOTE.—Carpenters, Joiners and Plumbers in all towns and districts receive 2d. per day Tool Allowances.

WOMEN'S RATES.—In all districts throughout the country the rate of wages for women engaged in craft processes is 1s. 11½d. per hour. Women introduced to carry out work other than craft processes, 1s. 7½d. per hour.

For Building Trade Wages in Scotland, see page 400

PRICES CURRENT OF MATERIALS*

NOTE.—These prices apply to large quantities of materials at works at London stations, or site, in London area as stated. Prices for smaller quantities ex merchant's warehouse will of course be higher. Owing to the exceptional circumstances which prevail at the present time, prices of materials should be confirmed by inquiry. The prices of softwoods are for cash on delivery.

BRICKS, etc.

	£ s. d.
First Hard Stocks	8 15 0
Second Hard Stocks	8 0 0
Mild Stocks	6 10 0

All loaded free into lorry at the works. The question of haulage is still very difficult and prices must be obtained from job to job.

2½-in Nominal Phorpres Bricks.	At Maiden Lane Stn., per 1,000. s. d.	To Sites in West Central District per 1,000. s. d.
Commons ..	73 0	85 0
Cellular	67 11	82 11
Keyed	75 0	87 0
Cellular Keyed ..	69 11	84 11
Rustics	93 0	105 0
Cellular Rustics ..	87 11	102 11
Single Bullnose ..	93 0	105 0
Best White Facings	156 6	157 10†
" "	142 10*	—
Sandfaced ..	103 0	115 0
Cortex Facing Brick	88 0	100 0

* At Kings Cross Stn. † ex Kings Cross Stn.

	£ s. d.
Best blue Pressed Staffs. (London Stns.) ..	18 9 0
Do. Bullnose (London Stns.)	19 2 0
Blue Wire Cuts (London Stns.)	16 7 6

Best Stourbridge Fire Brick (London Stns.) :—

£ s. d.	£ s. d.
2½ in. .. 16 18 6	3 in. .. 19 16 0

GLAZED BRICKS (London Stns.). The prices given below are now subject to a percentage addition of 22½.

Best White Ivory and Salt Glazed Stretcher	40 0 0	D'ble Stretchers	53 10 0
		D'ble Headers	48 10 0
		One side & two ends	54 10 0
Headers	39 10 0	Two sides & one end	56 0 0
Quoins, Bullnose & 4½in. Flats	50 0 0	Splays and Squints ..	52 0 0

Second Quality, £2 0s. per 1,000 less than best. Cream and buff, £2 0s. extra over white. Other colours. Hard Glaze, £5 10s. 0d. extra over white.

Haulage to site 20s. 1,000.

PARTITION SLABS.

Delivered Central London Area.

HOLLOW CLAY PARTITION BLOCKS.
London Brick Company.

Minimum Lorry Loads.	Keyed.	s. d.
2" per yd. sup.	120 yds.	3 1
2½" " "	100 "	3 4
3" " "	100 "	4 0
4" " "	84 "	4 7

Half blocks *add* 2s. per yard super to above prices

CLINKER CONCRETE.

2" per yd. sup.	2 8	3" per yd. sup.	4 0
2½" " "	3 4	4" " " ..	5 3

CRANHAM TERRA COTTA.

Size 12 x 9 x 2" per yd. super	3 1
Size 12 x 9 x 2½" " "	3 4
Size 12 x 9 x 3" " "	4 0
Size 12 x 9 x 4" " "	4 7

HEMPSTEAD—KEYED TWO SIDES,

12 x 9 x 2"	3 1	12 x 9 x 3"	4 0
12 x 9 x 2½"	3 4	12 x 9 x 4"	4 7

Per yard super d/d. Free on site, London.

Plus 2d. for smooth one side, and 4d. for smooth both sides.

STONE.

	s. d.
BATH STONE—	
Monks Park	5 4
St. Aldhelm Box Ground	5 10
Delivered in railway trucks at South Lambeth, G.W.R., per ft. cube.	
PORTLAND STONE—	
Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Nine Elms, S.Rly. per ft. cube	6 1½
NOTE.—1d. per ft. cube extra for every ft. over 20 ft. *average* and ½d. beyond 30 ft.	
HOPTON-WOOD STONE—	
F.O.R. Quarries, Wirksworth, Derbyshire. Random blocks up to 3 ft. 3 in. long and not over 10 cu. ft. per ft. cube	22 6
Slabs—Random sizes sawn 2 sides, up to 5 ft. long and not over 15 ft. super, ¾ in. per ft. super	4 7
YORK STONE, BLUE—*Robin Hood Quality.* Delivered at any Goods Station, London.	
6 in. sawn two sides landings to sizes (under 30 ft. super) per ft. super	9 4
6 in. rubbed two sides, ditto "	10 10
3 in. sawn two sides slabs (random sizes) "	4 5
2 in. to 2½ in. sawn one side slabs (random sizes) (paving) .. "	2 4
1½ in. to 2 in. ditto "	2 1½
HARD YORK—	
Delivered at any Goods Station, London	
Scrappled random blocks per ft. cube	13 4
6 in. sawn two sides landings to sizes (under 40 ft. super) per ft. super	10 0
6 in. rubbed two sides, ditto "	11 10
4 in. sawn two sides slabs (random sizes) "	6 5
3 in. ditto ditto "	4 10
2 in. self-faced random flags per yd. super ..	19 9

CEMENT.

	£ s. d.
Best British Portland Cement. Standard Specification delivered London area	
6-ton loads and upwards site..... per ton	3 0 6
1- to 6-tons site	3 3 6

In non-returnable paper bags charged at 11/– net per ton or 7d. each net per sack in lots of less than 1 ton.

In non-returnable jute sacks charged at 11/– per ton.

In returnable jute sacks charged at the rate of 35/6 net per ton of cement of 1/9½ net per sack in lots of less than 1 ton. Credit on return at 1/6 net per sack.

In returnable cotton sacks charged at the rate of 3/4 net each sack. Credit on return at 3/– net each sack.

"Ferrocrete" Rapid Hardening Cement 6-ton. loads and upwards site	3 6 6
1- to 6-tons site	3 9 6

In paper bags 11/– per ton extra.

"Aquacrete" Water Repellent cement, 31/6 per ton on ordinary "Blue Circle" prices. In paper bags, 9/– per ton extra.

Red, Buff or Khaki "Colorcrete" in 6-ton lots	5 2 0

In paper bags 9/– per ton extra.

Other colours, according to colour. In 4-ton lots from 173/– to 397/– per ton (including paper bags).

"Snowcrete" White Portland Cement (In free paper bags)	11 14 0
Under one ton ..... per cwt.	0 13 11
"417" Cement (Ultra Rapid Hardening) Delivered Site London Area in 6-ton lots and upwards	4 2 0

In paper bags 9/– per ton extra.

Super Cement (Waterproof), bags extra..	4 12 0
Cullamix Tyrolean Finish....£7 15 6 to (1-ton lots and upwards, including cost of paper bags).	9 9 0

£ s. d.	£ s. d.
Parian Cement 8 1 9	Keen's Cement, White 8 1 9
	Pink 7 15 6

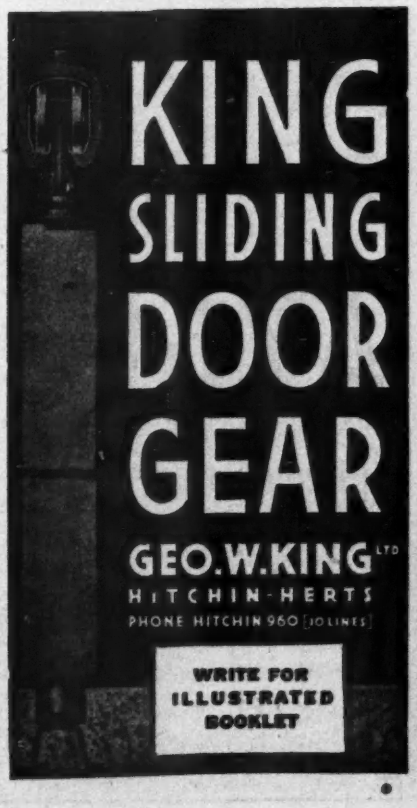
PLASTER.

£ s. d.	£ s. d.
Coarse, Pink 4 15 3	Sirapite, Coarse.. 4 16 3
" White 5 4 9	" Finish .. 5 4 3

Above prices for 1-ton loads and over London Area.

Blue Lias Lime, inc. bags, 6-ton lots 5 17 6	Hydrated Lime, 6-ton lots 4 1 6
Granite Chips, 6-ton lots .. 2 5 0	Lump Lime, 6-ton lots 3 15 3
	Hair, per cwt. .. 4 4 6

Stourbridge Fireclay in paper bags £4 2s. 0d., 6-ton lots at railway depot.



SAND.

D/D site in full lorry loads. Average of prices for Boroughs of Westminster, Paddington, Holborn and St. Pancras.

		s. d.
Thames Ballast	per yd.	15 9
Pit Ballast	"	15 10
Pit Sand	"	15 2
Washed Sand	"	17 0
¾ in. shingle	"	15 2
¾ in. Broken Brick	"	17 6
Pan Breeze	"	10 4

TILES.

Delivered at London rate stations in full truck loads of not less than 6 tons ..... Per 1,000 f.o.r. London.

Best machine-made tiles from Broseley or Staffordshire districts	9 14 6
Ditto, hand-made, ditto	11 11 0
Ornamental ditto	12 4 0
Hip and valley tiles—Hand-made	19 5
(per dozen) —Machine-made	18 4

NOTE.—Breakage in transit, purchasers' responsibility.

SLATES.

First quality slates from Penrhyn or Portmadoc. carriage paid in full truck loads to London Rate Station.

Per 1,000 actual	£ s. d.		£ s. d.
24 by 12	67 14 0	18 by 10	34 13 0
22 by 12	59 2 0	18 by 9	31 2 0
22 by 11	53 6 6	16 by 10	30 10 0
20 by 12	46 10 0	16 by 8	23 16 0
20 by 10	44 12 6		

NOTE : Breakage in transit, purchasers' responsibility.

PLUMBERS' BRASS WORK

Delivered in London.

M.O.H.

S.D. BIB COCKS CAUTCH HEAD, FOR IRON.

½ in 66/– ¾ in. 108/– per doz.

TOILET BIB COCKS FOR IRON.

½ in. 114/– ¾ in. 171/– per doz.

S.D. STOP COCKS FOR IRON.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
72/–	111/–	189/–	269/–	363/–	590/– per doz.

S.D.S. COCKS WITH TWO UNIONS FOR LEAD.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
102/–	164/–	264/6	369/–	438/–	736/– per doz.

DOUBLE NUT BOILER SCREWS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
17/–	20/–	33/–	68/–	108/–	140/– per doz.

HEAVY CROYDON BALL VALVES.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.
93/–	149/–	185/–	371/–	500/– per doz.

CAPS AND SCREWS.

1¼ in.	1½ in.	2 in.	3 in.	3½ in.	4 in.
23/6	26/6	45/–	68/–	89/–	112/– per doz.

BRASS SLEEVES.

1½ in.	2 in.	3 in.	3½ in.	4 in.
29/–	31/–	67/–	83/–	101/– per doz.

LEAD TRAPS WITH BRASS CLEANING SCREWS.

	1¼ x 6 lb.	1½ x 6 lb.	2 x 7 lb.	3 x 7 lb.
Lead P.	57/–	69/–	111/–	144/– per doz.
Lead S.	69/–	84/–	138/–	153/– per doz.

SOLDER.—Plumbers', 3/1, Tinmen's 3/11, Blow pipe, 4/– per lb.

Copper Tubes	1/9½ per lb. Basis.
Brass Tubes	1/9½ per lb. Basis.

Basis prices are subject to extras.

PAINTS, etc.

		£ s. d.
Raw Linseed Oil (5 galls.)	per gallon	1 1 9
Boiled Linseed Oil (5 galls.) ..	"	1 2 3
Genuine White Lead (free kegs)	cwt.	7 7 6
Genuine White Lead Paint (tins free)	gall.	2 5 0
Genuine Red Lead	cwt.	6 12 6
Putty (free packages)	cwt.	3 0 0
Size XD quality.....	fkn.	0 8 0

Turpentine substitute can be obtained and prices vary according to quality from 3/8 gallon upwards.

VARNISHES, etc.

		Per gallon.
Oak Varnish	Outside	1 6 0
Fine do.	"	1 16 0
Fine Copal	"	1 15 0
Pale Copal	"	1 12 8
Floor Varnish	Inside	1 10 0
Fine Pale Paper.....	"	2 1 0
Hard Drying Oak	"	1 10 0
Fine Hard Drying Oak	"	1 12 0
Fine Copal Varnish	"	1 13 6
Best do.	"	1 16 0
Best Japan Gold Size	"	1 15 0
Best Black Japan	"	1 8 6
Brunswick Black		1 4 6
Berlin Black		1 8 6
Knotting (patent)		1 12 6
French and Brush Polish		1 8 6
Liquid Dryers in Terebene		1 8 6

GLUE.

		£ s. d.
Best Scotch Glue	per ½ cwt.	1 14 6
Croid Glue	per lb.	2 9

* The information given on these pages has been specially compiled for THE BUILDER, and is copyright. The aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information. Prices are subject to 2½ per cent. cash discount.

PRICES CURRENT OF MATERIAL (— contd.)

See Note at top of preceding page.

METALS.

JOISTS, GIRDERS, &C., TO LONDON STATION. PER TO

R. S. Joists, cut and fitted	£30 10
Plain Compound Girders	£35 0
Stanchions	£42 10
In Roof Work	£53 0

NOTE.—These prices are for standard pieces and no Special pieces of an awkward nature.

MILD STEEL ROUNDS.—To London Stations, per ton.

Diameter.	£ s. d.	Diameter.	£ s. d.
½ in.	26 17 6	¼ in.	24 12 6
⅝ in.	26 2 6	⅜ in. to 2¼ in.	23 17 6
¼ in.	25 7 6		

WROUGHT TUBES AND FITTINGS.

Deliveries from works.

Deliveries from London stock further 2½% gross.

	Tubes ½"/6"	Tubulars ¼"/6"	10/17 and 19/24	Flanges ½"/2"	Flanges 2½"/6"
	%	%	%	%	%
Light weight	49½	—	43½	49	55½
Heavy weight	42	42	37½	39	47½
Galv. lightweight	28	—	28	28	28
Galv. heavyweight	18	18	18	18	18

Tubes and tubulars sizes ¼"/⅛" inclusive, charged extra of 5% less gross.

Fittings. Figs. 25/34 5% less gross discount.

Terms.—Net cash end of month following date of invoice. Carriage paid on lots of £10 nett value and over.

C.I. HALF-ROUND GUTTERS.—London Prices ex Works, per yd. in 6 ft. lengths.

	Gutters.	Nozzles.	Stop ends.
3 in.	2/5	2/2	7d.
3½ in.	2/8	2/5	7d.
4 in.	2/10	2/7	1/–
4½ in.	3/1	3/–	1/2
5 in.	3/5	3/3	1/3
O.G. GUTTERS			
3 in.	3/1	2/10	9d.
3½ in.	3/7	2/10	1/–
4 in.	3/7	3/–	1/2
4½ in.	3/8	3/5	1/3
5 in.	4/6	4/–	1/5

RAIN WATER PIPES.

Per yd. in 6 fts.	Pipe.	Bends. Angles.	Branches.
2 in.	5/–	2/7	3/10
2½ in.	5/3	3/–	4/6
3 in.	5/10	3/8	5/6
3½ in.	6/8	4/5	6/5
4 in.	7/8	5/3	7/8

NET PRICES.

Tonnage allowance—4-ton lots, 5 per cent. 2-ton lots, 2½ per cent.

L.C.C. COATED SOIL PIPES.—London Prices, ex stock.

Per yd. in 6 fts.	Pipe.	Bends.	Branches.
2 in.	5/11	4/6	5/6
2½ in.	6/3	5/1	6/10
3 in.	6/11	5/6	8/3
3½ in.	7/10	6/10	9/6
4 in.	8/11	7/8	11/1

L.C.C. COATED DRAIN PIPE.

	cwt. qr. lb. in 9 fts.	per yard.	Bends.	Branches.
4 in.	1 1 17....	16/3	12/3	21/6
6 in.	2 0 1....	24/2	25/4	43/9

Per ton basis in London.

	£ s. d.
IRON.—Staffordshire Crown, Merchant quality	28 5 0
IRON.—Staffordshire Marked Bars	36 0 0
Mild Steel Bars	22 10 0
Mild Steel Hoops	23 17 6

Ex Merchant's Stock per ton (two-ton) lots.

Soft Steel Sheets C.R. and C.A.—	£ s. d.
20 gauge	28 7 6
24 gauge	29 7 6
26 gauge	29 12 6
Galvanised Corrugated Sheets, 6 ft. to 9 ft.—	
20 gauge	34 15 0
24 gauge	36 10 0
26 gauge	38 15 0
Galvanised Flat Sheets, C.R. and C.A.—	
20 gauge	35 15 0
24 gauge	37 10 0
26 gauge	39 15 0

	Per ton. £ s. d.
Cut Nails, 3 in. and up, 1 ton lots	36 15 0

ALL NET.

METAL WINDOWS.—Standard sizes suitable for complete houses, included all fittings, painting two coats, and delivery to job, average about 5s. 0d. to 5s. 3d. per foot super.

LEAD, etc.

(Deliveries in London 5 cwts.)	Per ton. £ s. d.
LEAD.—Sheet, English, 3½ lb. and up	107 10 0
Pipe in coils	108 15 0
Soil pipe	112 15 0
Compo pipe	115 15 0

NOTE.—Country delivery, 10/– per ton extra, lots under 3 cwt., 4/– per cwt., extra and over 3 cwt. and under 5 cwt., 3/– per cwt. extra. Extra if cut to size. Old lead, ex London area, per ton, £68 0. 0. Buyers pay carriage.

BUILDING TRADE WAGES IN SCOTLAND

Following are grade rates authorised by the Scottish N.J.C. from July 11, 1948. Every effort is made to ensure accuracy, but we cannot be responsible for errors that may occur.

Grade Classification A Craftsmen..... 2/9½ Labourers..... 2/3

Aberdeen .....A	Dumfriesshire ....A	Inverness .....A	Perthshire .....A
Ayrshire.....A	Dundee .....A	Inverurie .....A	Peterhead .....A
Banff .....A	Dunoon .....A	Kincardineshire ..A	Renfrewshire ....A
Berwickshire .....A	East Fife .....A	Kinross-shire ....A	Rothesay .....A
Bridge of Allan....A	East Lothian.....A	Lanarkshire .....A	Roxburgshire .....A
Broughty Ferry....A	Edinburgh .....A	Midlothian .....A	St. Andrews .....A
Clackmannanshire A	Fifeshire .....A	Monifieth .....A	Selkirkshire .....A
Doune .....A	Forfarshire .....A	Moray and Nairn..A	Stewartry .....A
Dunblane .....A	Glasgow.....A	Newport .....A	Stirlingshire .....A
Dunbartonshire ..A	Greenock .....A	Peeblesshire .....A	Stornoway .....A
Dumfries .....A	Hamilton .....A	Perth .....A	Tayport .....A
			West Lothian ....A

The Scottish N.J.C. award on which this is based provides for variation to current rates of Apprentices and Trainees' wages, which will be increased according to scale.

The Information given in this table is copyright.

Painters' rates: 2/9½ Grade A; 2/8½ Grade B. (Grade B towns are Banff and Moray and Nairn.)

GLASS.

SHEET GLASS, ORDINARY GLAZING QUALITY.

CUT SIZES.	Per ft. Super d.
18 oz.	4½
24 oz. clear	5½
26 oz.	7½
32 oz.	9½

ENGLISH ROLLED PLATE AND FIGURED CATHEDRAL, ETC., IN CUT SIZES.

Over 500 ft. super of all kinds.	Per ft.
Rolled plate, ¼ in.	7½
Rough cast, 3/16 in.	8½
Rough cast, ¼ in.	8½
Figure rolled, and Cathedral white	7½
Figure rolled, and Cathedral tinted	10½
Rolled sheet	6
Reeded, Broad Reeded, Cross Reeded and Chevron Reeded, ¼ in. thick	11

Rolled plate is the same price as rough cast double rolled.

	Per ft. d.
Wire Cast, ¼ in. thick	9½
Georgian Wired Cast	10½

HOLLOW GLASS BLOCKS.	s.	d.	
P.B. 2—5½ in. x 5½ in. x 3½ in.	2	6	each net
P.B. 3—7½ in. x 7½ in. x 3½ in.	3	6	"
P.B. 32—7½ in. x 7½ in. x 3½ in.	3	6	"
Radiused Corner Brick to match up with—			
P.B. 2	4	6	"
P.B. 3	6	0	"
P.B. 32	6	0	"

TIMBER, SOFTWOODS AND HARDWOODS.

HOME GROWN TIMBER PRICES.—See *Statutory Rules and Orders*, 1947, No. 94, price 5d. net.

IMPORTED SOFTWOODS PRICES.—See *Statutory Rules and Orders*, 1947, No. 731, price 1s. 1d. net.

IMPORTED HARDWOODS PRICES.—See *Statutory Rules and Orders*, 1947, No. 1524, price 1s. 1d. net.

Note.—The above can be obtained from H.M. Stationery Office, York House, Kingsway, W.C.2.

PATENT GLAZING by AYGEE in ALUMINIUM ALLOY SYSTEMS and LEAD CLOTHED STEEL

Enquiries Invited

AYGEE LTD.

100, Westminster Bridge Road London, S.E.1. 'Phone: WATerloo 6314.

BARS ONLY SUPPLIED IF REQUIRED

THE SCOTTISH BUILDER

NEW BUILDINGS

Bellshill.—Plans in the hands of the Weir Housing Association, Ltd., Calder-st., Coatbridge, for new houses.

Cleland.—Plans prepared for firewood factory for which the architects are Cowie & Miller, Cleland-rd., Wishaw.

Edinburgh.—Reconstruction of premises proposed at Montague-terr., for Edinburgh Savings Bank, Hanover-st. Architects, Oldrieve, Bell and Paterson, 22, Ainslie-pl.

Glasgow.—At Langland-rd., classrooms to be erected, for which the architect is I. MacNab, 129, Bath-st., Glasgow.

Glasgow.—At West Regent-st., from plans by their own architects, the Beacon Assurance Co., Ltd., Birmingham, to carry out alterations and additions.

Glasgow.—B.B.C. propose extension scheme for which the contractors are J. Train, Ltd., Glasgow.

Lanarkshire.—Cardonald Mill housing scheme to be erected from plans by Glasgow Housing Architects.

Building Science Exhibition.

The Building Science Exhibition, now on view at Electric House, Wellesley-road, Croydon, until October 9, shows how science is applied to the study of building materials and methods of construction of buildings. It presents the work of the Building Research Station and of other laboratories of the Department of Scientific and Industrial Research, including the National Physical Laboratory, the Fuel Research Station and the Forest Products Research Laboratory. The exhibition also shows what scientific work is being done and the results, while models demonstrate how houses should be built. There are also examples of modern heating appliances, specimens of scientific apparatus, models, photographs and explanatory panels. Although intended primarily for builders and architects, the exhibition should also interest the householder. It will be open from 9.30 a.m. to 5.30 p.m. daily, except Sundays.

Books for Boy Builders.

Last year approximately 400 prizes of book tokens for the purchase of technical or educational books were awarded by the Building Apprenticeship and Training Council of the Ministry of Works to boy builders at schools or in apprenticeship. This year similar prizes are to be awarded from the welfare fund of the B.A.T.C. for outstanding work. Awards are open to apprentices at technical or art schools and colleges with building classes, and to boys in apprentice-master scheme projects or in normal apprenticeship. The closing date for receiving recommendations is October 15. Heads of technical institutions, apprentice masters or employers who wish to make recommendations and have not yet received particulars should write at once for the recommendation form (A.W.10) to: The Secretary, Building Apprenticeship and Training Council, Ministry of Works, Lambeth Bridge House, S.E.1.

FUTURE CONSTRUCTION

PUBLIC APPOINTMENTS

Full details of Public Appointments open will be found in the Advertisement pages of this and previous issues.

CONTRACTS OPEN

For some contracts still open but not included in this list see previous issues. Those with an asterisk are advertised in this number. The dates at the heads of paragraphs are those for the submission of tenders; a dagger (†) denotes closing date for applications; the name and address at the end refer to the person from whom particulars may be obtained.

BUILDING

OCTOBER 5.

†**Nottingham T.C.**—5 shops with dwelling accommodation at Cockington-rd., Bilborough. C. A. Pilkington (L.), Housing A., Guildhall. Dep. £2 2s. Tenders November 11.

OCTOBER 6.

†**Bilston T.C.**—68 houses and 5 flats in 4 contracts at various sites. Boro' A., 20, Wellington-rd. Dep. £2 2s. each contract.

OCTOBER 7.

†***Coventry T.C.**—First contract for Central Redevelopment. D. E. E. Gibson, City A., 1a, Warwick-row. Dep. £3 3s.

†***Essex C.C.**—Farm cottage and incidental work at Hazels Farm, Gt. Bromley, nr. Colchester. J. Soloman, F.R.I.C.S., 69, Duke-st., Chelmsford.

OCTOBER 8.

†**Amesbury R.D.C.**—Two houses at Durnford. Bothams & Brown, 32, Chipper-la., Salisbury. Dep. £2 2s. Tenders by October 19

OCTOBER 9.

Accrington T.C.—68 aged persons' dwellings at five sites. B.E. Dep. £1 1s.

†**Crosby T.C.**—20 flats at College-rd., Waterloo. B.E. & S., Town Hall. Dep. £2 2s.

Kirkby-in-Ashfield U.D.C.—16 houses and incidental works at Greenwood-dr. and Skegby-rd. estates. B. W. Bostock, E., S. & Housing A., Public Offices. Dep. £2 2s.

OCTOBER 11.

Bucks C.C.—New infants' school at Totteridge-la., High Wycombe. Guy R. Crouch, C., County Hall, Aylesbury. Dep. £5 5s.

Cuckfield R.D.C.—20 dwellings at Albourne. E. & S., Council Offices, Boltro-rd., Haywards Heath. Dep. £2 2s.

Gudworth.—20 houses. C. M. Pratt, C., 5, Regent-st., Barnsley. Dep. £1 1s.

†**Cumberland C.C.**—First instalment of Primary School at Maryport. County A., 15, Portland-sq., Carlisle.

Esher U.D.C.—Reinstatement and conversion into offices of Esher Lodge. E. & S. Dep. £1 1s.

Faringdon R.D.C.—10 houses with road, sewer, etc. K. M. Hart, E. & S., Council Offices. Dep. £2 2s.

Heckmondwike U.D.C.—38 houses at Dale-la. estate. F. A. Brown, S., Oldfield-la. Dep. £2 2s.

Mansfield T.C.—26 houses at Bancroft-la. estate. B.E. & S., Carr Bank. Dep. £2 2s.

Norwich T.C.—Police houses at 3 sites. City A. Dep. £1.

Orrell U.D.C.—78 houses. E. & S., Council Offices, Orrell Post, nr. Wigan. Dep. £2 2s.

Rhondda U.D.C.—16 houses at Pontrhondda, Llwynypia. E. & S., Council Offices, Pentre, Rhondda. Dep. £2 2s.

St. Austell U.D.C.—5 pairs of houses at Poltair. E. & S. Dep. £2 2s.

Watford R.D.C.—10 Airey houses with outbuildings, drainage, etc., at Battlers Green-dr., Willow-way, Radlett. C., Council Offices, Wynyard House, Langley-rd. Dep. £1 1s.

†***Watford R.D.C.**—8 houses at New-rd., Radlett. S. A. Nicholson, C., Council Offices, Wynyard House, Langley-rd., Watford. Dep. £1 1s.

OCTOBER 12.

Alton R.D.C.—12 houses at Chawton. C., Council Offices, Barton End, Alton. Dep. £3 3s.

Ches. C.C.—Prefabricated hutting for additional accommodation at Cheadle Moseley Hall Grammar School. County A., The Castle, Chester. Dep. £2 2s.

Ches C.C.—Two pairs of police houses at Altrincham. E. M. Parkes, County A., The Castle, Chester. Dep. £2 2s.

Isle of Man Local Govt. Board.—14 houses with site works, etc., at Janet's Corner, Castletown. J. Philipps Lomas, architect, Martins Bank-chbrs., Victoria-st., Douglas. Dep. £2 2s.

Nidderdale R.D.C.—38 houses at various sites. Needham & Thorp (F. & A.), 6, High Petergate, York. Dep. £2 2s.

Southend-on-Sea C.B.—92 houses at site No. 7, Prince-ave. B.E. Dep. £2.

†***Surrey C.C.**—Alterations and redecoration at Francis Hill House, Camberley. County A., County Hall, Kingston-on-Thames. Dep. £2 2s.

OCTOBER 13.

***Colchester T.C.**—Houses at Shrub End site. (a) 5 blocks of 2 type U.2; (b) 4 blocks of 2 type 7/8 and 2 blocks of 4 3B/5B; (c) 1 block of 4 and 2 blocks of 2 aged persons' bungalows. B.E. Dep. £2 2s. each type.

OCTOBER 14.

Caerns E.C.—Kitchen and dining-room at Brynrefail Grammar School and Groeslon Junior School. County A. Dep. £1 1s.

Dublin T.C.—70 houses at Crumlin, North, area. City Treas., Exchange-bldgs., Lord Edward-st. Dep. £3 3s.

Friern Barnet U.D.C.—30 flats at Colney Hatch-la., N.10. C., Town Hall. Dep. £2 2s.

Harrow U.D.C.—66 dwellings at site fronting Weald-la. and Long Elms, Harrow Weald. E. & S., Council Offices, Uxbridge-rd., Stanmore. Dep. £2 2s.

Newcastle-on-Tyne C.C.—156 houses in 5 groups at Section "A," Montagu housing estate. City A. Dep. £5 5s.

***Wem R.D.C.**—Two pairs of houses at Newtown. C. H. Simmonds, C., Barber House. Dep. £2 2s.

Wembley T.C.—30 flats at Fryent estate, Church-la., Kingsbury. Boro' Treas. Dep. £2 2s.

†***Winchester T.C.**—30 houses and 36 flats at Stanmore estate. A. S. Wilson & Partners, 8, Princes-st., Storey's-gate, Westminster, S.W.1. Dep. £2 2s.

OCTOBER 15.

Liverpool T.C.—Canteen and kitchen at Loraine-st. Secondary School. City A. & Director of Housing, Dale-st. Dep. £2 2s

†***Potters Bar U.D.C.**—20 houses at Blanche-la. site, South Mimms. E. & S., Wyllyotts Manor, Darkes-la., Potters Bar. Dep. £2 2s.

†***West Sussex C.C.**—(a) Prefabricated hut for Youth Centre at Petworth; (b) prefabricated hut for drawing office at School of Building, Union-pl., Worthing. F. R. Steele (F.), County A., County Hall, Chichester.

OCTOBER 16.

Halstead U.D.C.—16 Duplex houses at Parkfields estate. A. E. Wiseman, architect, 10, Duke-st., Chelmsford. Dep. £3 3s.

Kingsclere and Whitchurch R.D.C.—2 pairs of houses at Tadley and site works, etc., at site No. 24, Station-rd., Whitchurch. F. Henshaw (F.), Westminster Bank-chbrs., Andover. Dep. £2 2s.

Littlehampton U.D.C.—28 dwellings at Lyminster-rd. E. & S., Council Offices, Manor House. Dep. £2 2s.

†***Wivenhoe U.D.C.**—One to four pairs of aged persons dwellings at The Avenue. H. Hudley Pawsey, C., Council Offices, High-st. Dep. £2 2s.

York T.C.—24 old people's bungalows at Carr estate. City E. & Architect, Guildhall. Dep. £2.

OCTOBER 18.

Beckenham T.C.—Repairs to houses at Elmers-end estate (contract No. 6). B.E. & S., Town Hall. Dep. £2.

***Castle Donington R.D.C.**—52 houses with street works at four sites. McCarthy Collings & Co., chartered architects, 187, Forest-rd., Coalville. Dep. £2 2s.

Chelmsford T.C.—36 flats with site works, etc., at Upper Bridge-rd. B.E., S. & Architect, Municipal Offices. Dep. £2 2s.

***Chesterfield T.C.**—Civic restaurant at Beetwell-st. B.E. & S. Dep. £2 2s.

***Clacton U.D.C.**—(a) One pair of houses at Elm-gr.; (b) five blocks each comprising four flats at Cotswold-rd., and Berkeley-rd. E. & S., Town Hall. Dep. £2 2s.

Pewsey R.D.C.—4 houses at Everleigh with sewers, etc. E. & S., Council Offices. Dep. £2 2s. (by cheque).

OCTOBER 19.

Amble U.D.C.—2 cottages at Links estate. S., Council Offices. Dep. £2 2s.

Gillingham T.C.—47 houses in various groups at Featherby-Eastcote estate. B.E. & S. Dep. £5 5s.

***Rochdale C.B.**—108 dwellings at Kirkholt estate. B.S. Dep. £2 2s.

OCTOBER 20.

***Bournemouth C.B.**—Eight shops with flats over at Kinson estate. Boro' A. (Room 51), Town Hall. Dep. £2 2s.

Hatfield R.D.C.—16 cottages at Birchwood-ave. J. H. Parker (A.), North-pl., 82, Gt. North-rd., Hatfield. Dep. £2 2s.

OCTOBER 21.

Kidsgrove U.D.C.—62 houses at Ashenough estate, Talke. E. & S., Town Hall. Dep. £5 5s.

Kidsgrove U.D.C.—Eight houses at Woodshutts estate. Wood, Goldstraw & Yorath, chartered architects, Victoria-chbrs., Station-rd., Tunstall, Stoke-on-Trent. Dep. £5 5s.

OCTOBER 22.

Wellington (Salop) R.D.C.—20 houses at High Ercall and 20 at Tibberton. Walter B. Bond, F.R.I.C.S., 3, Newhall-st., Birmingham. Dep. £2 2s.

Weymouth and Melcombe Regis T.C.—16 houses at Westhaven estate, Abbotsbury-rd. B.E. & S., 6, Pulteney-bldgs. Dep. £2 2s.

OCTOBER 23.

***Barnet U.D.C.**—Conversion of cleansing station into dwelling at Mission Hall, Totteridge-la. E. & S.

***Widnes T.C.**—68 dwellings at Crow Wood estate. F. Mellor (F.), Boro' A., Brendan House, Widnes-rd. Dep. £2 2s.

OCTOBER 25.

***Blackwell R.D.C.**—16 houses, The Maltings site, Langwith, Architect and Housing Superintendent, "Dale Close," 100, Chesterfield-rd. South, Mansfield. Dep. £2 2s.

***Huntingdon E.C.**—Kitchen and dining-room at Holywell C. of E. School. T. H. Longstaff, County S. and Architect, Walden House.

***States of Guernsey.**—14 houses at Les Naftiauk Arsenal, St. Andrew's. G. Hegg, States E., States Office, Guernsey. Dep. £1.

Wisbech T.C.—38 houses at Mount Pleasant/Bath-rd. estate. B.E. & S., Exchange-sq. Dep. £2 2s.

OCTOBER 27.

Fareham U.D.C.—42 houses at Mays-la., Stubbington. E. & S., Westbury Manor, Fareham. Dep. £2 2s.

***Machynlleth U.D.C.**—34 houses. Walter B. Bond, F.R.I.C.S., 3, Newhall-st., Birmingham. Dep. £2 2s.

Northfleet U.D.C.—42 houses at New House Farm estate. E. & S., Council Offices. Dep. £2 2s.

OCTOBER 29.

Dublin C.C.—58 houses at Ballybeden, Rathfarnham. Engineers' Office, 6, Parnell-sq. Dep. £10 10s.

***Portland U.D.C.**—16 old people's houses at Pound Piece, Weston. Crickmay & Sons, 23, St. Thomas-st., Weymouth. Dep. £2 2s.

OCTOBER 30.

***Newcastle-on-Tyne Regional Hospital Board.**—Two low-grade homes at Aycliffe Hospital, Heighington, Darlington. G. R. Clayton (F.), County A., Court-la., Durham.

NOVEMBER 1.

Ruislip-Northwood U.D.C.—(a) 16 flats at Long-dr., South Ruislip; (b) maisonettes (14 blocks of 4 flats) at Wiltshire-la. estate. E. & S. Dep. £2 2s.

NOVEMBER 3.

Alcester R.D.C.—Eight houses at Aston Cantlow. Francis B. Andrews & Son, 95, Colmore-row, Birmingham. Dep. £2 2s.

NO DATE.

***Aycliffe Development Corporation.**—Applications invited for erection of houses, roads and certain public buildings early in 1949. A. W. Thomas, general manager, Simpasture, Aycliffe, nr. Darlington.

PAINTING, ELECTRIC LIGHTING, MATERIALS, ETC.

OCTOBER 13.

Nottingham E.C.—External cleaning and painting at 3 schools at Bilborough. Ed. Office (Surveyors' Dept.), 18, Park-row. Dep. £1 each contract.

ROADS, SEWERAGE AND WATER WORKS

OCTOBER 12.

Droitwich R.D.C.—Roads and sewers at Hartlebury. S., R.D. Offices. Dep. £2 2s.

Guildford T.C.—Roads and sewers at Upfolds estate. B.E. & S. Dep. £2 2s.

Market Bosworth R.D.C.—1,650 yds. of sewer from 6 in. to 12 in. dia. and construction of sewage disposal works at Higham-on-the-Hill.

Pick, Everard, Keay and Gimson, 6, Millstone-la., Leicester. Dep. £2 2s.

OCTOBER 13.

Wakefield T.C.—Roads and sewers at Eastmoor estate, Extension 2. City E. Dep. £2.

Wycombe R.D.C.—Sewerage and sewage disposal works at Hazlemere site. Architect and S., 28, High-st., High Wycombe. Dep. £3 3s.

OCTOBER 14.

Rickmansworth U.D.C.—Roads and sewers at site No. 8. S., Council Offices. Dep. £3 3s.

OCTOBER 16.

†**Crawley Development Corporation.**—Roads and sewers. Chief E., Broadfield, Crawley, Sussex.

Manchester T.C.—Making-up Tyndall-ave., Moston. City S. Dep. £1 1s.

OCTOBER 18.

Luton R.D.C.—Roads and sewers at Heath and Reach site. E. & S., 73, West Parade, Dunstable. Dep. £2 2s.

OCTOBER 19.

Battle R.D.C.—Roads and sewers at Netherfield. Works E., Council Offices, The Watch Oak, Battle. Dep. £3 3s.

OCTOBER 20.

***Rushden U.D.C.**—Roads and sewers at Upper Queen-st. E. & S., Council-bldgs.

OCTOBER 22.

Wellington (Salop) R.D.C.—Sewerage and sewage disposal at High Ercall. A. H. S. Waters, M.I.C.E., 25, Temple-row, Birmingham, 2. Dep. £3 3s.

OCTOBER 25.

Chesterton R.D.C.—Sewerage works at Great Shelford. Willcox, Kaikes and Marshall, 33, Gt. Charles-st., Birmingham 3. Dep. £10 10s.

Oundle and Thrapston R.D.C.—Water supply to northern area. Pick, Everard, Keay and Gimson, 6, Millstone-la., Leicester. Dep. £2 2s.

Oundle and Thrapston R.D.C.—Sewers and sewage disposal works at King's Cliffe. Pick, Everard, Keay and Gimson, 6, Millstone-la., Leicester. Dep. £2 2s.

OCTOBER 26.

Kettering T.C.—Construction of Barton Segrave main drainage scheme. E. & S., 3, Gold-st. Dep. £2 2s.

OCTOBER 28.

Huntingdon R.D.C.—Sewerage and sewage disposal works at Alconbury and Alconbury Weston. Pick, Everard, Keay & Gimson, 6, Millstone-la., Leicester. Dep. £2 2s.

OCTOBER 29.

Lleyn R.D.C.—Sewerage and sewage disposal works at Llithpaen. Richards & Dumbleton, Cornwall-bldgs., 45, Newhall-st., Birmingham, 3. Dep. £5 5s.

Lleyn R.D.C.—Sewerage and sewage disposal works at Efail Newydd. Richards & Dumbleton, Cornwall-bldgs., 45, Newhall-st., Birmingham, 3. Dep. £5 5s.

OCTOBER 30.

Hartley Wintney R.D.C.—Site preparation works at Sandy-la. E. & S., Council Offices. Dep. £3 3s.

NOVEMBER 1.

Gloucester T.C.—Construction of reservoir at Leathern Bottle. City S. & Water E. Dep. £2 2s.

Guildford T.C.—260 lin. yds. of 9-in. soil sewer at sewage disposal works. B.E. & S. Dep. £2 2s.

NOVEMBER 5.

Upper Stour Valley Main Sewerage Board.—Sewers, storm-water tanks and pumping station at Bellevale. G. Plant Deeley, M.Inst.M.E., 13, Church-st., Stourbridge. Dep. £5 5s.

NOVEMBER 8.

Bakewell R.D.C.—Extension of sewer at Gt. Longstone. Brady & Partington, engineers, Market-st., Chapel-en-le-Frith. Dep. £2.

NOVEMBER 12.

Chesterton R.D.C.—Supply and construction of water mains, etc., at Croxton and Eltisley. E. & S., County Hall, Hobson-st. Dep. £2 2s.

GENERAL BUILDING WORK

(LONDON)

Barnes.—Houses.—2, Carlton-rd. Architects, L. Farman & Partners, 47, Richmond Park-rd.

Barnes.—Extension.—Of factory, Derby-rd., for Magnet Match Co. Architects, L. Farman & Partners, 47, Richmond Park-rd.

Bermondsey.—Baths.—At Rotherhithe-st., for B.C.

Chiswick.—Alterations.—To shops, 260-262, Chiswick High-rd., for Rego Clothiers, Ltd. Architects, Charles Courtier & Co., 24, Willcott-rd. W.3.

Clapham.—Flats.—Further section of housing scheme, Notre Dame estate, comprising 232 flats in 6- and 8-storey blocks. C. H. James (F.), 5, Bloomsbury-st., W.C.1. Quantity surveyors, L. A. Francis & Son, Vernon House, Sicilian-ave., W.C.1.

Croydon.—Temp. Housing.—T.C. seeking loan for purchase of land for temp. housing at following sites: 9, Marion-rd., 56, 62, Woodville-rd., 100, Macclesfield-rd., 39, Bensham Manor-rd., 50, 52, 54, 58, 66, Denmark-rd., 58, 60, Addison-rd., 28-32 (even), 34, Oxford-rd. and land at rear, 2-8, Crystal-terr., 7, Heathfield-rd., garden land rear 17, Sylvan-rd.

Croydon.—Housing.—Lay-out plant for 1,750 houses at first National Trust estate approved by M.H.

Croydon.—Schools.—M. of E. approved following projects in T.C.'s programme:—New schools at Heathfield, St. Peter's and Fairchildes (instalment); additions at Ingram sec. mod. sch., Kensington-ave. prim. sch.; Monks Orchard prim. sch.; St. Joseph's R.C. prim. sch.; Portland sec. mod. sch. and adaptations at Overbury prim. sch.

Deptford.—Building.—L.C.C. to acquire sites at New Cross-rd. and Goodwood-rd. B.C. to erect 28 dwellings, 10 maisonettes and 10 shops at New Cross-rd.

Deptford.—Housing.—L.C.C. approved plans for houses at Rokeby-rd. for B.C.

Edgware-rd.—Public House.—Town planning approval. Architects, W. G. Ingram, Son & Archer, 4, Verulam-bldgs., Gray's Inn, W.C.1.

Friern Barnet.—Licensed Premises.—Watney Combe Reid & Co., Ltd., seeking sanction to build licensed premises, junction of Colney Hatch-la. and Sidney-rd.

Fulham.—Flats.—B.C. to erect 400 flats at Hurlingham No. 2 Polo Ground at £750,000.

Gidea Park (Essex).—Rebuilding.—W.D.C. approved rebuilding 34-42, Stafford-ave. Architects, W. Goodchild & Co., 85, South-st., Romford.

Greenwich.—Flats.—B.C. to purchase land at Beaconsfield-rd. for flats.

Greenwich.—Housing.—B.C. to purchase land at Trafalgar-rd., Mell-st., Tuskar-st. and Woodland-cres. for housing.

Hammersmith.—Alterations.—To St. Paul's Boys' School. Architect, N. O. Waumsley, P.A.S.I., 4, The Green, Richmond, Surrey.

Hampstead.—Housing.—B.C. applying for loan of £123,000 for acquisition of part of Broadhurst-gdns. site.

Hampstead. — Housing. — L.C.C. considering loan of £34,000 to B.C. for housing at West End-la.

Lewisham.—Housing.—L.C.C. to acquire land at Vestris-rd. for B.C. for housing.

Lewisham.—Flats.—(49) at South-rd. for B.C. Boro' A.

Lewisham.—Dwellings.—Boro' A. submitted scheme to L.C.C. for approval:—Baring-rd. (98), Burghill-rd. (48), Devonshire-rd. (28), Perryvale (112). Wates, Ltd., submitted schemes to L.C.C. for B.C.:—Whitefoot-la. (54), Park House (30).

Lewisham.—Flats.—B.C. to obtain loan of £171,355 for 96 flats at Thorpewood-ave.

Lewisham.—Flats.—B.C. to obtain loan of £180,522 for 101 flats at Daneswood-ave.

Portman-sq.—Repairs.—To No. 19. Adams, Holden and Pearson (FF.), University of London, W.C.

Watford.—Storage Warehouse.—At Holywell, for Sun Printers, Ltd., Whippendale-rd. Arch., Stanley Peach & Partners, 28, Eccleston-sq., S.W.1.

(PROVINCIAL)

Batley.—T.C. to apply for sanction to borrow £21,000 for 16 houses and 4 bungalows at Smithies Moor-la. estate, £2,300 for 2 houses at Nova-la. estate and £6,640 for 8 bungalows at Healey estate. T. Mossop, B.S., Town Hall.

Bolton.—T.C. propose permanent shops at housing estates and to seek sanction of M.H. for further houses on sites already prepared.

Bournemouth.—Plans approved for 5 shops with flats, Hillview-rd., for Davis Estates, Ltd., 7, St. Michael's-rd.

Bromsgrove.—Worcs C.C. propose health centres at Recreation-rd. and at Rubery.

Burnley.—T.C. approved:—Sanitary block at Turf Moor football ground for directors of Burnley Football and Athletic Co., Ltd.; additions to bakery at Coal Clough-la., County Bakeries, Ltd.; dairy at Springwood House Farm, Bardenla., for Capt. T. A. Tatton.—Supercrete Co., Ltd., propose factory at Gannow-la.

Cheadle and Gatley.—U.D.C. propose development of 62-acre site for 500 houses at Councillor-la.

Chelmsford.—Eastern Tractors, Ltd., propose additions to sales department and service station, Springfield-rd. E. R. Collister (A.), 6, London-rd.

Chelmsford.—Office building, Navigation-rd., for Holdsworth & Hansen (London), Ltd., 15, Seward-st., E.C. E. R. Collister (A.), 6, London-rd., Chelmsford.

Cheshire.—E.C. propose sec. mod. schs. with agricultural bias at Poole Hall, Nantwich, and at Calveley Hall, Tarporley.

Cosham (Hants).—F. W. Woolworth & Co., Ltd., contemplate extensions, 29-31, High-st. Architects' Dept., 311, Oxford-st., W.1.

Coventry.—T.C. propose 147 houses at Lupton-rd. and Brayford-ave., Stivichall estate.—T.C. propose health centres at Holbrooks-la., Monks Park estate, and Prior Doram-wk., Tile-hill estate.—E.C. propose adaptation of gas showrooms, Corporation-st., for youth cafe and centre.

Darwen.—T.C. propose nursery sch. at Blackburn-rd. Methodist premises.

Dublin.—City C. to build 2,000 prefabricated houses.—30,000 dwellings proposed during next 10 years at £39,000,000.

Durham.—C.C. to negotiate for sites at Spennymoor and Ferryhill for new technical and modern schools, respectively.—C.C. to provide dining-room at Stockton-on-Tees Carlile Memorial R.C. School.—C.C. to acquire Hurworth Old Hall as residential training centre for youth and adult organisations.

Farnham.—M.H. allocated 100 houses.

Garstang.—Cttee. of Whitechapel and Ingiewhite Village Hall Fund propose village hall at Whitechapel.

Great Harwood.—U.D.C. propose completion of Waverledge housing scheme.

Hatfield.—M.H. allocated 50 council houses.

Heckmondwike.—U.D.C. propose 38 houses at Dale-la. estate, White Lee.

Higham Ferrers.—T.C. propose development of High-st. estate.

Houghton-le-Spring.—U.D.C. to built 100 "Easiform" houses on Fencehouses site.—38 brick houses planned at Fencehouses to be transferred to racecourse extension site. V. J. Hunter is U.D.C. S.

Huthwaite.—H. C. Groom & Co., Ltd., blouse makers, Lime-ave., propose extensions to factory at Lime-ave.

Hyde.—T.C. approved alterations to football stands at Ewen Fields, for directors of Hyde United Football Club, Ltd.

Kirkham.—U.D.C. received sanction of M.H. to proceed with 24 council houses and 6 by private enterprise.

Liverpool.—Plans for Radium Institute, incorporating section built before the war drawn up by Management Committee. Liverpool Regional Hospital Board approved. Cost, £500,000.

Llanystumdwy. — Caernarvon C.C. propose county college.

Malton.—North Riding C.C. propose sec. mod. sch. J. Catchpole (A.), C.A., County-bldgs., Northallerton.

Manchester.—M. of W. issued licence for second instalment of reconstruction of Royal Exchange at £196,200.

Manchester.—T.C. to apply to M.H. for loan of £585,016 for 464 houses at Woodhouse-park and Moss Nook area, Wythenshawe. A. Mackenzie (L.), housing director, Town Hall.

Manchester. — T.C. approved: — Rebuilding shop and office after war damage at 7, St. John-st., Longworth-st., Deansgate, for Ellis Markendale, Ltd. (T. Beesley, arch., 912, Kingsway, East Didsbury); transport garage and office at Sherborne-st., Strangeways, for G. Massey & Sons (W. W. Taylor, arch., 5, Wellington-rd., South, Stockport); additions to factory at rear of 143, Cheetham-hill-rd., Cheetham, for B. Sykes (H. Marks, arch., 2, Castleton-rd., Broughton, Salford 7); alterations to factory at 79-87, Cheetham-hill-rd., Cheetham, for Harrymac Manufacturing Co., Ltd. (J. R. Gradwell, arch., 51, South King-st.); extensions to garage at 190-204, Bury New-rd. and rear of Sabrina-st., Cheetham, for Green & Zonis, Ltd.; British Legion social centre at Woodhouse-la., Northen Etchells, for cttee. (A. C. Curphey, arch., 102, School-la., Didsbury); grocery stores at 43, Lloyd-st. South, Moss-side, for Hunters, Ltd. (A. E. McCutcheon, arch., 1180a, Chester-rd., Stretford); conversion of 309-311, Wilmslow-rd., Fallowfield, into 9 flats and studio, for C. H. Barber, 1, Brook-rd., Fallowfield; workshop and garage at Bent-st., Cheetham, for North-Western Electricity Board, Grid House, Wilmslow-rd., East Didsbury; 14 houses at Parrs Wood-rd. South and Mellington-ave., Didsbury.

For
IRONMONGERY
FIREPLACES
SANITARY FITTINGS
etc.
TEUTEN
& COMPANY LTD.
153, QUEEN VICTORIA ST.
LONDON E.C.4
Telephone: CENtral 2254
Established 1869

for D. & G. Emery (Builders), Ltd., 452, Wellington-rd. North, Heaton Chapel, Stockport (H. Bowker, arch., Wilderspool, Rutland-rd., Eccles); laboratories at works, Crumpsall-vale, Blackley, for I.C.I., Ltd., Hexagon House, Blackley.

Nantwich.—R.D.C. propose adaptation of buildings for 3 residential homes for aged people.

Newport (Salop).—Shrops C.C. propose adaptation of 127, High-st. for welfare clinic, etc.

Northampton.—Regional Hospitals cttee. propose conversion of buildings into a gymnasium at General Hospital, Billing-rd. at £3,000, and extensions of occupational physiotherapy unit at Manfield Orthepædic Hospital at £2,550.

Northants.—E.C. propose dining-room and kitchen at Guilsborough vol. sch.

Northumberland.—C.C. to erect canteen kitchen at Beal county school. W. W. Tasker, C.A., County Hall, Newcastle-on-Tyne.

Overton.—R.D.C. propose houses at Bettisfield, Bangor-on-Dee and Tybrough.

Oxford.—British Red Cross Society, 14, Grosvenor-cres., S.W.1, acquired 107, Banbury-rd. for conversion into home for aged persons. Architects, Deacons & Pritchards, 49, Leadenhall-st., E.C.3.

Rochdale.—T.C. propose ter. houses at Kirkholt estate.

Salford.—M.H. sanctioned rebuilding of town hall by T.C. at £30,000.

Salford.—T.C. propose:—2 hostels for aged people; extensions to Regent-rd. county prim. sch. at Duncan-st., West Peel-st. and John Wood-st.; extensions to Lancaster-rd. jun. mixed and infants' sch.; adaptation of Springfield and Greenbank for children's homes; joint scheme with Oldham and Warrington T.C.s to establish hostel for maladjusted children.

Scarborough.—T.C. approved alterations to Ebenezer Chapel, Columbus-ravine, for Trustees. W. S. Gray, arch., 100, Filey-rd.

Sheffield.—T.C. propose 342 houses at Littledale estate.

Sheffield.—Public Works Dept. propose district works sub-depot at Parson Cross estate extension.—T.C. received allocation from M.H. for 640 houses.

Shrewsbury.—Cttee. of Bomere Health Village Hall propose alterations to village hall.

Skipton.—James **Hartley & Sons, Swadford**-chbrs., arch. for development of estate at Colne-rd., Glusburn, for R. Patrick.

Stockport.—T.C. to apply to M.H. for sanction to borrow £11,823 for 10 houses at Nangreave-rd.—T.C. propose sports stadium at Woodbank-pk.

Stockton-on-Tees.—Plans approved for factory for North-Eastern Trading Estates, Ltd. Architects, Crawford & Ellis, 10, Market-pl., Bishop Auckland. Plans passed for four police houses at Darlington-la. for Durham C.C. (C.A., Court-la., Durham City).—Tarslag, Ltd., Bowesfield-la., Stockton, to convert offices into houses and flats at Bowesfield-la.—J. G. L. Poulson, of Pontefract, is architect for improvements to stationmaster's house at Norton Station.—Stockton Co-op. Society, Wellington-st., proposes dairy at Church-rd.

Sunderland.—Henderson Bros. & Co., Ltd., to establish factory at Pallion, Sunderland.

Tolworth (Surrey).—Block of 9 flats, Ravenscar-rd. Architects, S. P. Anderson & Eglington, King Stone House, High-st., Kingston-on-Thames.

Warrington.—T.C. propose county prim. sch. at Dallam Farm estate. Plans by J. Y. Hughes, B.S., Mun.-bldgs., Bank-park. Quantities by A. E. Newman, Chester.

West Bromwich.—British Legion branch cttee. propose extensions to Legion headquarters at Edward-st. C. A. Randle, arch., 77, Stanley-rd., Stone Cross, West Bromwich.

Wharfedale.—R.D.C. propose trad. houses at Bramhope.—Received sanction for 4 additional houses at Pool.

Wigan.—T.C. to apply to M.H. to borrow £97,073 for section of 86 trad. houses at Norley Hall estate.

Wigan.—Directors of Wigan Athletic A.F.C., Ltd., propose reconstruction of Springfield Park football ground. Plans by Grimshaw & Townsend, archs., 24, Willow-st. Accrington.

Worsley.—U.D.C. propose development of sites at Manchester-rd., Little Hulton, for 600 houses, for Salford T.C. Wilfrid Thorpe & H. Hirst Smith (L. & F.), 66, Deansgate, Manchester 3.

TENDERS

* Denotes *accepted*.
† Denotes *provisionally accepted*.
‡ Denotes *recommended for acceptance*.
§ Denotes *accepted subject to modification*.
¶ Denotes *accepted by H.M. Government departments*.

Aylesbury.—Works, for B.C.: 22 old people's bungalows at California: *F Harrowell, Tring, £17,898; 3 temporary shops at California: *Webster & Cannon, Ltd., £1,218.

Blyth.—16 houses at Victoria Mill-rd., Framlingham, for R.D.C. H. W. Lovell (A.), A.M.T.P.I., architect, Council Offices, Rendham-rd., Saxmundham, Suffolk. P. Park, quantity surveyor: *Wm. C. Reade (Aldeburgh), Ltd., £32,177 (including road and site works).

Calne.—28 houses at Abberd housing No. 3 scheme, for T.C. T. V. Oliver, M.I.Mun.E., B.S.: *Blackford & Son (Calne), Ltd., London-rd., Calne, Wilts, £40,372.

Canterbury.—New Simon Langton Girls' School, Old Dover-rd., for E.C.: *Ringmer Building Works, Ltd., £230,908.

Cheadle.—12 houses at Cheddleton, for R.D.C.: *W. Bramner & Co., £15,218.

Chertsey.—50 houses at Hare Hill estate, Ottershaw, for U.D.C. W. V. Davies, E. & S. Quantities by E. J. Harris & Partners: *E. Clarke & Sons, Ltd., Addlestone, £51,173 (38); *H. Beasley & Sons, Staines, £13,683 (12).

Chesterfield.—5 pairs of houses at Highfield-rd., for T.C. B.E. & S., Town Hall: *E. Beresford, 153, Boythorpe-rd., Chesterfield.

Colwyn Bay.—Houses, for T.C.: *W. R. Salisbury & Peel, Ltd., £21,428 (16); *F. Tyldesley, Llandudno, £41,647 (32) (both subject to Welsh Board of Health approval).

Cosseley.—38 houses with roads and sewers at Bransford estate, for U.D.C. P. J. Stanton, S., The Council House: *K. E. Millard & Co., Ltd., New Wolverhampton-rd., Oldbury, Worcs, £33,732.

Crayford.—6 houses at Slade Green, Kent, for U.D.C.: *Dartford Co-operative Society Building Dept.

Dartford.—40 aged persons' flats at Temple Hill estate, for B.C.: *Dartford Co-operative Society Building Dept.

Eastbourne.—Conversion into nine flats and caretaker's flat of Compton Hotel, 1-2, Willington-gdns. Architect, Hugh C. Ford (A.), 7, Gildredge-rd.: *Carn & Sons, 90a, Tideswell-rd., Eastbourne.

East Retford.—Seven houses at Darlton with service road, etc., for R.D.C. L. G. Rowlinson (L.), Council Offices, Amcott House, 40, Grove-st., Retford: *G. Burman, Union-st., Retford, Notts, £11,621.

Ebbw Vale.—48 houses at Glyncoed North site, contract No. 11, for U.D.C. J. G. Hoskin, architect, Council Offices: *S. D. Bevan, Beaufort, Mon.

Esher.—Public convenience at Holly Hedge-rd., Cobham, for U.D.C. Chas. G. Alderton, A.M.I.C.E., E. & S.: *The Challenge Fencing & Construction Co., 53a, High-st., Cobham, Surrey, £550.

Eye.—6 bungalow-type houses at Victoria Hill: *A. F. Knights, Debenham, £6,890.

Gateshead.—Extensions to factory at Team Valley Trading Estate, for Bushing Co., Ltd. Architects, Cackett, Burns Dick & McKellar, 21, Ellison-pl., Newcastle: *A. Anderson, Ltd., Stanmore-rd., Newcastle.

Goodmayes.—Rebuilding Nos. 13-23, Hazeldene-rd. Architects, W. Goodchild & Co., 85, South-st., Romford, Essex: *Hammond & Miles, Ltd., Scrafton-rd. Works, Ilford, Essex.

QUARZITE
A NATURAL STONE
IN STOCK
PAVINGS
FAÇADES
SHOPFRONTS
SWIMMING POOLS
JOHN STUBBS
MARBLE & QUARZITE LTD
LIVERPOOL 7

Hampstead.—60 dwellings at Kilburn Priory housing scheme, for B.C.: *Myton, Ltd., Clough-rd., Hull, £121,189 (subject to any necessary sanctions).

Hartley Wintney.—Four houses at South Warnborough, for R.D.C. P. Coleridge, architect: *A. J. Dunning & Sons, Ltd., Weyhill, £6,357 (subject to satisfactory references and M.H. approval).

Hastings.—Conversion into shops and flats of 1, Verulam-pl. Architects, Henry Ward & Sons, 6, Bank-bldgs.: *Stace & Sons, 67, Norman-rd., St. Leonards-on-Sea.

Heston and Isleworth.—Works for B.C. 25 houses and two aged persons' bungalows at Hounslow West site, Section "A": *Norman Sinclair, Ltd., £36,962; five houses and 10 aged persons' bungalows at same site: *Roger Miller & Co., Ltd., £15,179.

Kidsgrove.—42 houses and 10 bungalows at Woodshutts estate, for U.D.C. Wood, Goldstraw & Yorath, chartered architects, Victoria-chbrs., Station-rd., Tunstall, Stoke-on-Trent. Quantities by S. Sutcliffe, P.A.S.I., chartered quantity surveyor: *J. & F. I. McEllin, Ltd., New-rd., Bignall End, Stoke-on-Trent, £63,641.

Lewisham.—External painting and war damage repairs at Town Hall and Town Hall extension, for B.C.: ‡T. W. Driver, Ltd., £8,216.

Lichfield.—Factory at Trent Valley Estate, for International Presswork, Ltd. Peacock & Bewlay (FF.), 83, Colmore-row, Birmingham 3: *J. R. Deacon, Ltd., Lombard-st., Lichfield, Staffs.

London.—Conversion of 16, Harley-st. into flats. Architects, Elliott, Son & Boyton, 86, Wimpole-st., W.1: *John Laing & Sons, Ltd., Mill Hill, N.W.10.

London.—Restoration and repairs at 44-45, Lincoln's Inn Fields, W.C.2. Architects, Young & Hall, 9, Southampton-row, W.C.1: *Higgs & Hill, Ltd., Crown Works, South Lambeth-rd., S.W.8.

London.—Conversion of 111, Harley-st. into flats. Architects, Elliott, Son & Boyton, 86, Wimpole-st., W.1: *J. W. West & Son, 5, Harley-pl., Harley-st., W.1.

L.C.C.—Contracts exceeding £2,500 in value placed by L.C.C. during period ending September 23: Provision of accommodation at Laysterne School, Shoreditch, for Smithfield College of Food Technology, Stone & Co. (London), Ltd. Erection of two blocks of dwellings, etc., at Devons estate, Poplar, Tersons, Ltd., E.C.1.

¶London (Admiralty).—*Yeovilton*, Ilchester, Erection of houses, Selleck Nicholls & Co., Ltd., East Hill, St. Austell, Cornwall. *St. Merryn*, Site works, Selleck Nicholls & Co., Ltd., East Hill, St. Austell, Cornwall. *Shotley*, H.M.S. "Ganges," Central mess and galleys, Hutton (Builders), Ltd., Birch, Colchester.

¶London (Air Ministry).—Contracts to value of £500 or over for week ended September 18:—Building work: W. Turner (Builders), Ltd., 42, Upper Richmond-rd., East Sheen, S.W.14.

London (Air Ministry).—Contracts to value of £500 or over for week-ended September 25:—*Building work*: Haymills (Contractors), Ltd., London, W.5; F. Hossock & Son, Sleaford, Lincs. *General maintenance work*: Scottish Aviation, Ltd., Prestwick. *Painting work*: T. Jenkinson & Son (Doncaster), Ltd., Doncaster; W. J. Wood Building Renovators, Ltd., Manchester 4; Geo. Jones & Son (Contractors), Ltd., Liverpool 6; West Midlands Erection Co., Ltd., Willenhall, Staffs.

¶London (M.O.W.).—Contracts placed by M.O.W. during week ended September 18:—*London*: Site No. 2 Camp Griffiths, Bushey Park, Demolition and reinstatement, Coles Demolition and Excavation, Ltd., 174, Twickenham-rd., Isleworth. *Ches*: Grange School, Ellesmere Port, Hutted accommodation, A. Hopley (Little Sutton), Ltd., Station-rd., Little Sutton, Wirrall; John-st. School, Ellesmere Port, Hutted accommodation, A. Hopley (Little Sutton), Ltd., Station-rd., Little Sutton, Wirrall. *Devonshire*: 57-58, Polish Depts. Camp, Stover Park, Newton Abbot, Alterations and adaptations to huts, Staverton Builders, Staverton, Totnes, Devon. *Durham*: Frederick Nattress School, Stockton-on-Tees, Additional classrooms, Chas. J. Boyd, Ltd., 15, Emmerson-st., Middlesbrough; R.C. School, Hebburn, Additional classrooms, Isaac Berriman, Fence House, Co. Durham. *Hampshire*: Emsworth, Hants, Automatic telephone exchange, Hoad & Taylor, Ltd., 4, Market-sq., Horsham, Sussex; Senior County School, Hartley Witney, Additional classrooms, A. J. Sapp, 5, Hackney-rd., Basingstoke, Hants. *Herts*: M/L. N.S.H.C. Hostel, Breaches Camp, Waltham Abbey, Adaptations, redecorations and additional drainage, S. G. Cobban & Co., Glengall Works, Snakes-la., Woodford Green, Essex. *Kent*: Head Post Office, Ramsgate, Alterations, Grummant Bros., 100, Grange-rd., Ramsgate.

Leics: Saltby Airfield, Leicester, Adaptations to form M/Agric. & Fisheries Hostel, Browning Bros., Main-st., Humberstone. *Northumberland*: Senior School, Morpeth, Additional classrooms, G. Wimpey & Co., Ltd., Orchard House, Fenwick-ter., Newcastle-on-Tyne; Glanton School, Glanton, Additional classrooms, G. Wimpey & Co., Ltd., Orchard House, Fenwick-st., Newcastle-on-Tyne; Whitley Memorial School, Bedlington, Additional classrooms, T. H. Nicholson, 9-11, High-st., Blyth. *Orkney*: Kirkwall Coastguard

Station, Kirkwall, District Officer's House, S. Baikie & Son, Ltd., Kirkwall Saw Mills, Kirkwall, Orkney. *Staffs*: St. Patrick's R.C. School, Newcastle-under-Lyme, Temporary school buildings, Stephen Heath & Son, Brunswick-st., Newcastle-under-Lyme. *Surrey*: M.O.W. Transport Depot, Beddington-la., Croydon, Alterations and adaptations, Higgs & Hill, Ltd., Crown Works, South Lambeth-rd., S.W.8. *Sussex*: C.E. School, Eastbourne Meads, School kitchen and dining-room, Walter Llewellyn & Son, Ltd., 3, Cornfield-ter., Eastbourne. *Warwickshire*: N.S.H.C. Overslade Hotel, Rugby, Internal painting and cleaning, Walter & Taylor, Ltd., 16, Railway-ter., Rugby. *Yorks*: D.P.E.C. Fitzwilliam, Rotherham, New factory premises, Hadden Builders, Ltd., 40, Spring-st., Sheffield.

¶ **London (War Dept.).**—Works contracts placed by War Dept. for week ended September 18:—*Flint*: Miscellaneous work, Allan Wilson, Rhyl. *Glos*: Building work, Wm. T. Nicholls, Ltd., Gloucester. *Oxon and Berks*: Descaling boilers, Sofnol, Ltd., Greenwich, S.E.10. *Hants*: Renewing water mains, R. Holford & Co., Ltd., Guildford.

Maltby.—Dining-room and kitchen at Maltby Hall Secondary School, nr. Rotherham, for West Riding E.C. H. Bennett (F.), County A., County Hall, Wakefield: *Jaques & Greeves, Ltd., 3, Cedar-rd., Balby, Doncaster.

Manchester.—Garage and car-park at Spear-st., off Dale-st., for Hall, Higham & Co., Ltd: *J. Gerrard & Sons, Ltd., Pendlebury-rd., Swinton, Manchester.

Middlewich.—Extensions to salt works at Brooks-la., for Murgatroyd's Vacuum Salt Works, Ltd. Sloan & Lloyd Barnes, consulting engineers, 34, Castle-st., Liverpool 2: *A. Monks & Co., Ltd., Green-la., Padgate, Warrington.

Newhaven.—12 houses at Meeching estate for U.D.C. Alwyn Underdown (F.), 9, Hyde-gdns., Eastbourne: *S. Whyte, 28, Rose-walk, Newhaven, £15,634.

Redbourn.—4 pairs of houses at Tassell Hall, for Parish Council: *Axtell & Harborough, Redbourn, £10,257 (subject to M.H. approval).

Romford.—Rebuilding Nos. 161-173, Dagenham-rd., for W.D.C. Architects, W. Goodchild & Co., 85, South-st., Romford, Essex: *L. W. Tider, Ltd., 1, Grosvenor-dr., Hornchurch, Essex.

St. Albans.—Houses at Sunnydell, Trippendell-la., St. Stephens, for R.D.C.: *Swain, England (Builders), Ltd., £2,455 (2); *R. C. Ebbs, Ltd., £10,695 (8).

S. Kensington.—Extension of Imperial College of Science and Technology, Prince Consort-rd., for Board of Governors. Thomas Worthington & Son, consulting architects, 178, Oxford-rd., Manchester. E. R. Babbs & Sons, 40, St. James's-pl., S.W.1, quantity surveyors: *Holland & Hannen and Cubitts, Ltd., 1, Queen Anne's-gate, S.W.1.

Southport.—50 houses for T.C. H. L. Bunting, M.C., B.Sc., M.Inst.C.E., B.E., Town Hall: *Morris Bros. Estates, Ltd., Carr-la., £41,008 (36); *L. Livesey (Builders), Ltd., 33, Hoghton-st., £15,955 (14). (Both of Southport.)

Stoke Newington.—Works, for B.C.: 12 flats at 64-70 and 87-93, Walford-rd., *A. Scott & Sons (London), Ltd., 5, Beechdale, N.21, £19,667; 6 flats at 1-7, Howard-rd., and 6, Cowper-rd., *Direct Labour, £15,363; 3 flats at 70-74, Brighton-rd., and 6 at rear of 55-61, Lordship Park, *A. T. Cawchorne, Ltd., 6, Windermere-ave., W.19, £17,430.

Streatham.—Rebuilding houses at Sherwood-av., for W.D.C. Architect, Leonard Ralph, F.A.I., 95, Rushey-green, Lewisham, S.E.6: *Jones & Freasey, Ltd., 77, Rushey-green, Lewisham, S.E.

Swansea.—80 houses at Penlan, for B.C.: *R. B. Burdon, Hounslow, £111,940.

Swynnerton.—Gymnasium at Nelson Hall Training College for Staffs E.C. A. C. H. Stillman (F.), County Education A., Education Offices, Stafford: *M. A. Boswell (Contractors), Ltd., School-st., Wolverhampton.

Tewkesbury.—10 houses at Priors Park, for T.C.: ‡Espley's, Evesham, £16,152.

Todmorden.—40 houses at Ashenhurst-rd., for T.C. S. Greenwood, M.I.Mun.E., B.S., Municipal bldgs.: *Tarran Industries, Ltd., Clough-rd., Hull, £50,500.

Walthamstow.—12 houses at Higham Hill-rd./Lowther-rd. for B.C.: ‡E. W. Baker (Builders), £16,142 (subject to M.H. approval).

Wallsend.—Rebuilding quay for Parsons Marine Steam Turbine Co., Ltd. Engineers, R. T. James & Partners, 1, St. Nicholas-bldgs., Newcastle-on-Tyne: *G. Wimpey & Co., Ltd., Hendon, Sunderland.

Walsall.—10 houses at Severn-rd., Green Rock: *Seaman Bros., Darlaston, £11,931; 8 at Beechdale-rd. and Central-dr., Dudley's Fields estate: *Seaman Bros., Darlaston, £9,330.

Wokingham.—Eight houses at King Street-la. site, Winnersh, together with sewage disposal works, for R.D.C. Eric G. V. Hives (L.), 3, Cork-st., Reading. Quantities by Henry Cooper & Sons, 6, Forbury, Reading: *R. H. & E. Plumridge, 180, Reading-rd., Wokingham, Berks, £13,075 for houses and £4,232 for sewage disposal works.

Wood Green.—40 flats at Bounds Green, for B.C.: *Myton, Ltd., Clough-rd., Hull, £88,988 (M.H. state tender figure must be reduced by about £8,000 before sanction can be given).

Workington.—Dining-room and kitchen at Technical School, for Cumberland E.C. J. H. Houghan (F.), County A., County Offices, 4, Alfred-st. North, Carlisle: *G. Wimpey & Co., Ltd., Orchard House, Welburn Park, Newcastle-upon-Tyne.

FEDERATION OF MASTER BUILDERS

UNITE FOR STRENGTH

10,000 BUILDERS

are now members of the

FEDERATION OF MASTER BUILDERS

The Largest Truly Representative Organisation in the Industry

MAPS OF LONDON DISTRICT—AVAILABLE TO BUILDERS

Showing Labour Exchanges (Indexed), £1.0.0 post free.

ENROL NOW

SUBSCRIPTION £4.4.0 p.a.

LONDON REGION—37 AREAS

And over 70 PROVINCIAL BRANCHES

'Phone or write:

Secretary:

26, Ct. Ormond St., Holborn, W.C.1.

Tel.: CHAncery 7583 (4 lines)

Telegrams: "EFEMBE, Holb, London"

The address of your Branch Secretary will be forwarded.

WOOD BLOCK FLOORS

STEVENS & ADAMS LTD.

Victoria Works,

Point Pleasant, Wandsworth, S.W.18

Boyle's Patent "Air Pump" Ventilator

OVER TWO MILLION IN USE

ROBERT BOYLE & SON

VENTILATING ENGINEERS

98, HERRIES STREET, KILBURN LANE, W.10

Tel.: LADbroke 2879

THE ESSEX STEEL SCAFFOLDING CO.

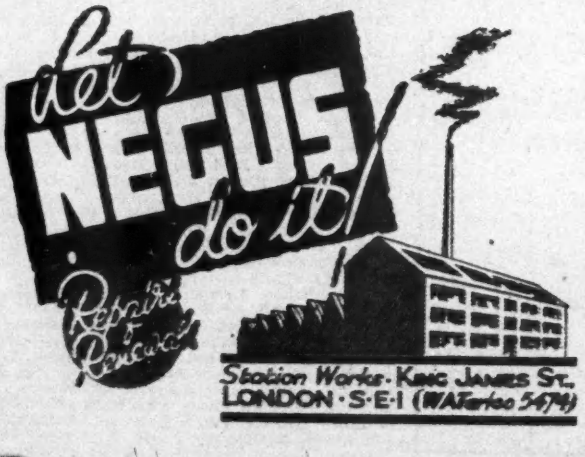
SMART'S LANE,

LOUGHTON, ESSEX

TEL.: LOUGHTON 295

SALES HIRE

ERECTION CRADLES



GALBRAITH

BROTHERS LIMITED

BUILDERS

CONTRACTORS

& ENGINEERS

of

CAMBERWELL

HEAD OFFICE:

34 & 35, HIGH HOLBORN, LONDON, W.C.1

Tel.: CHAncery 7901-3